



Inventors: Thomas L.C. Simpson et al.
Application No.: 10/748,589
Confirmation No.: 8944
Title: Medical Data Communication Notification and Messaging System and Method
Sheet 1 of 59 Sheets

104 FIG. 1

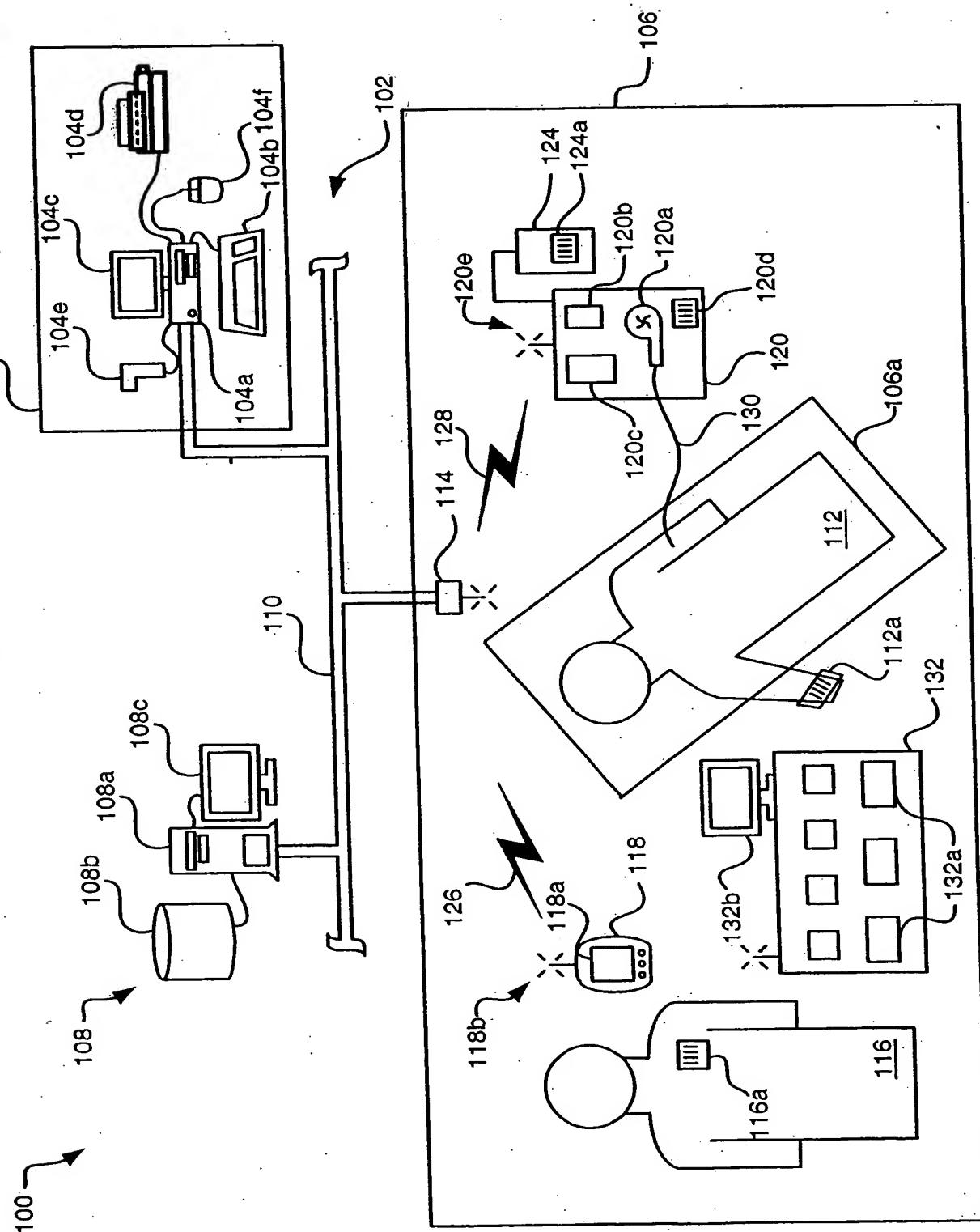
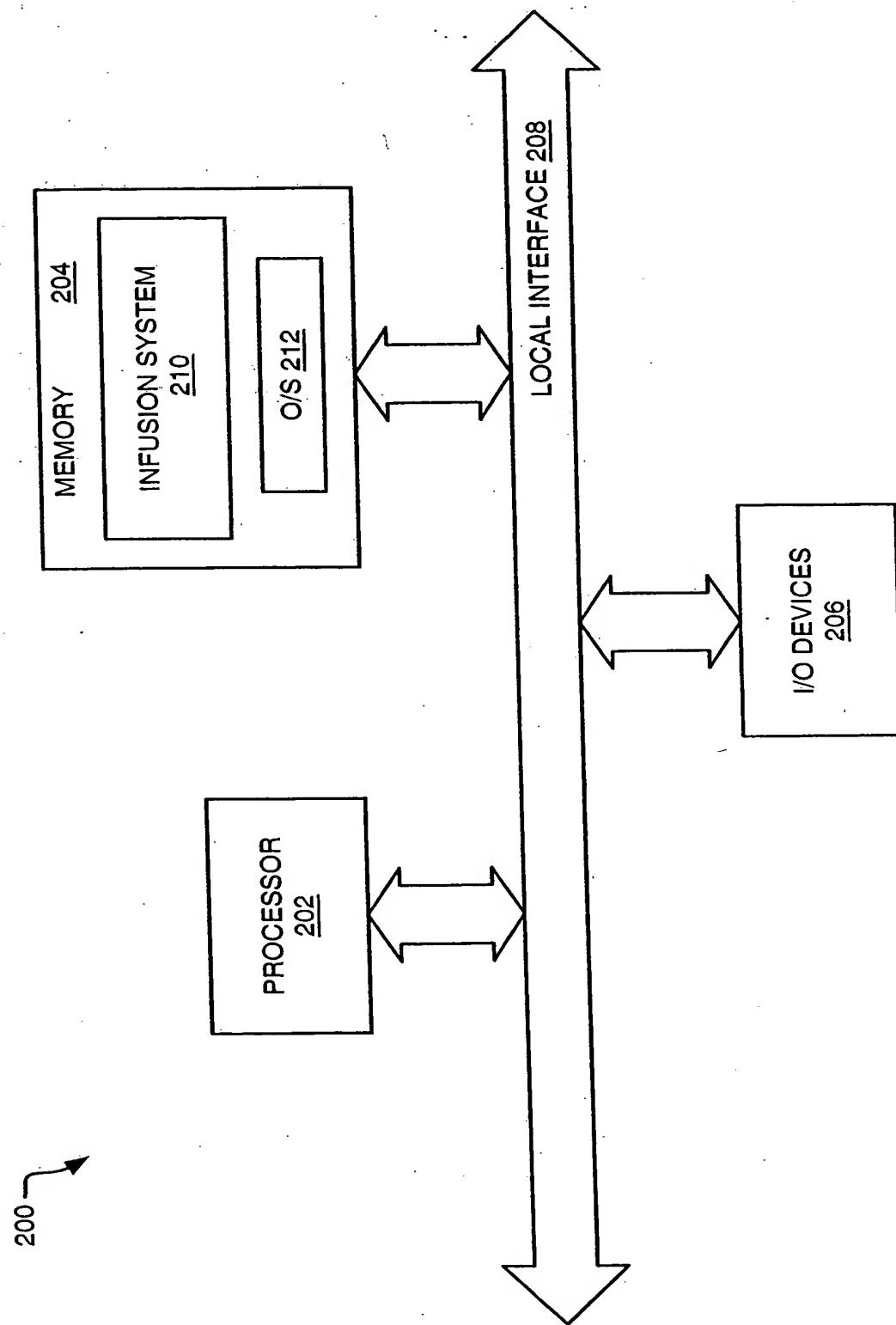


FIG. 2



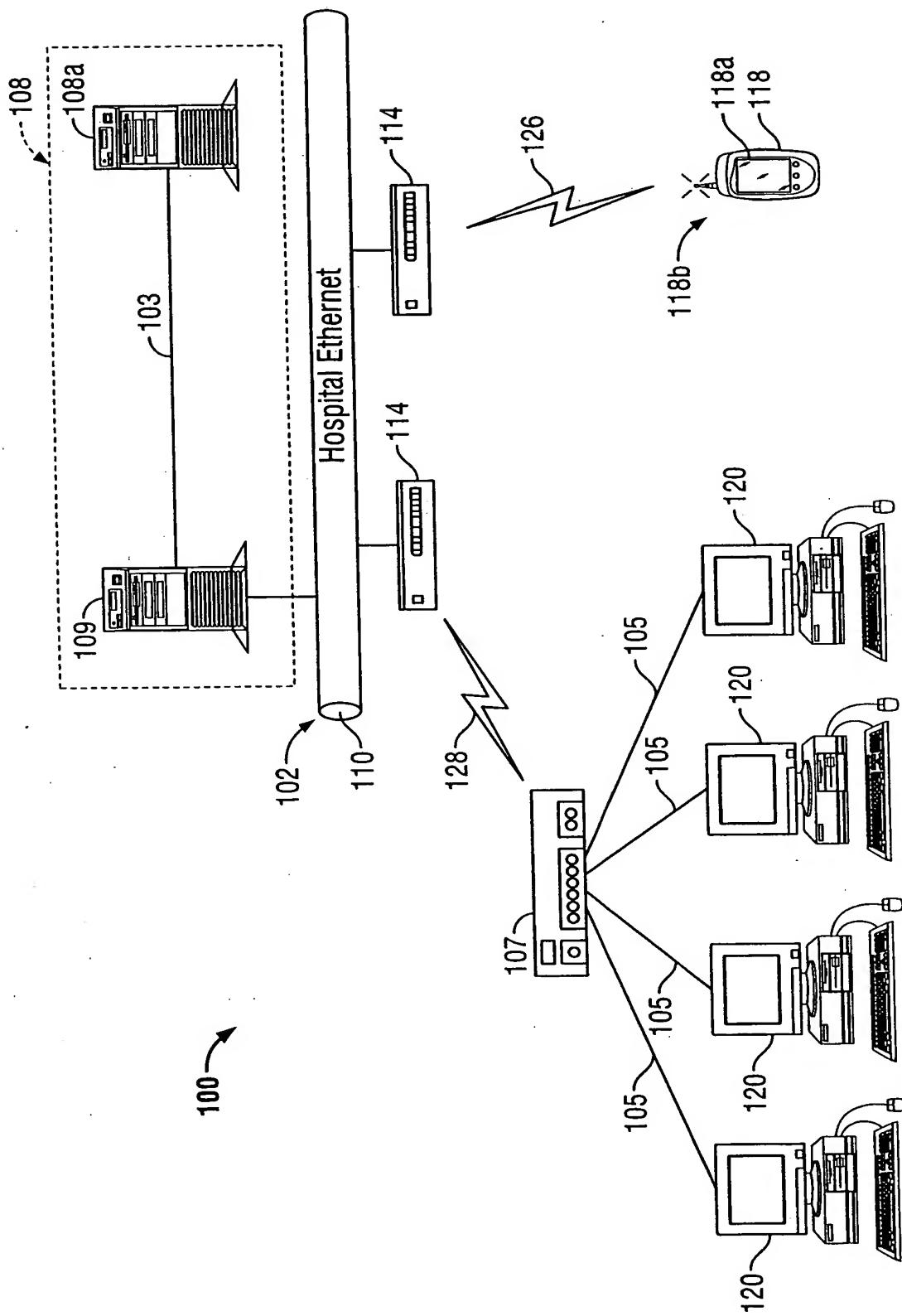


FIG. 3

FIG. 4

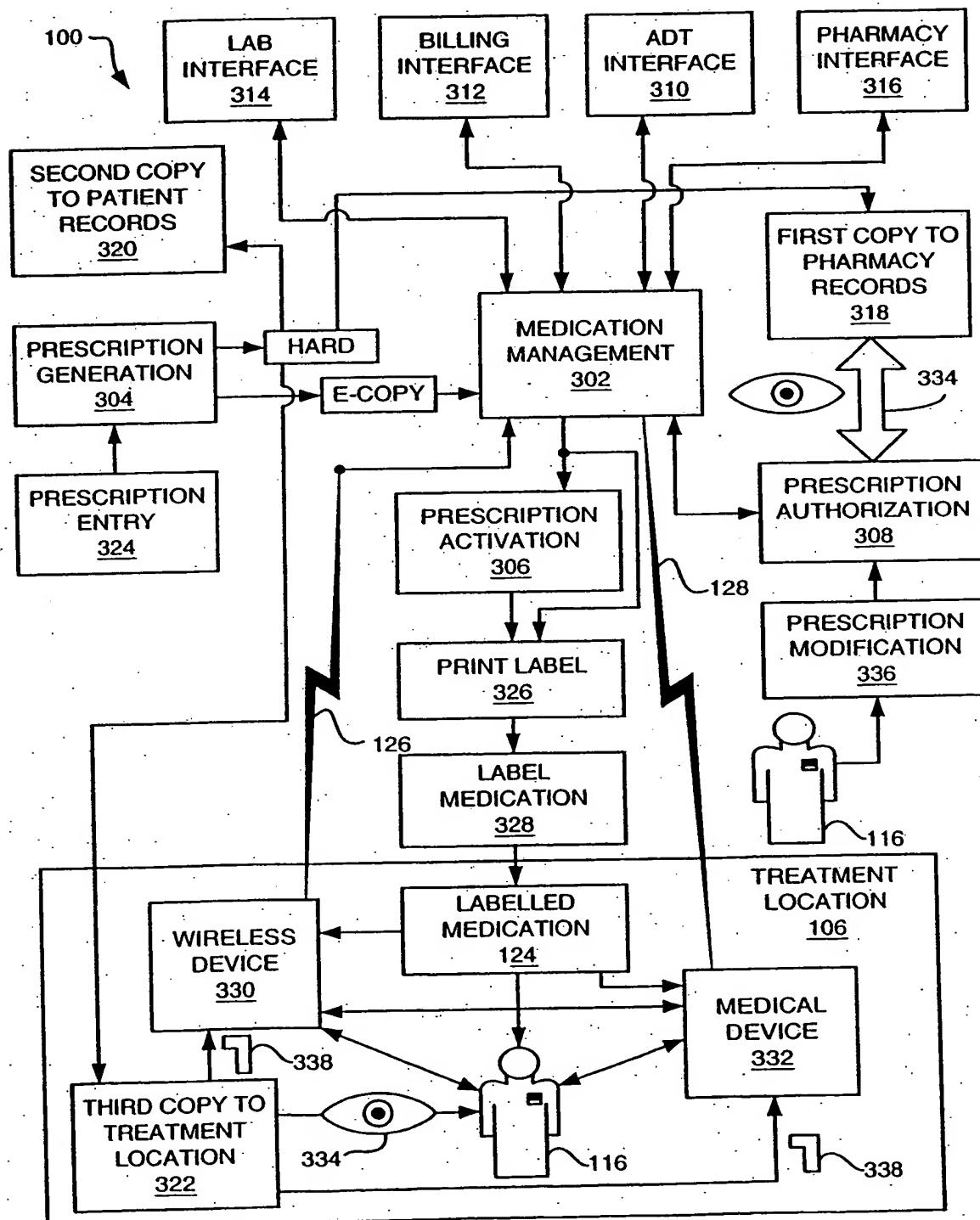


FIG. 5

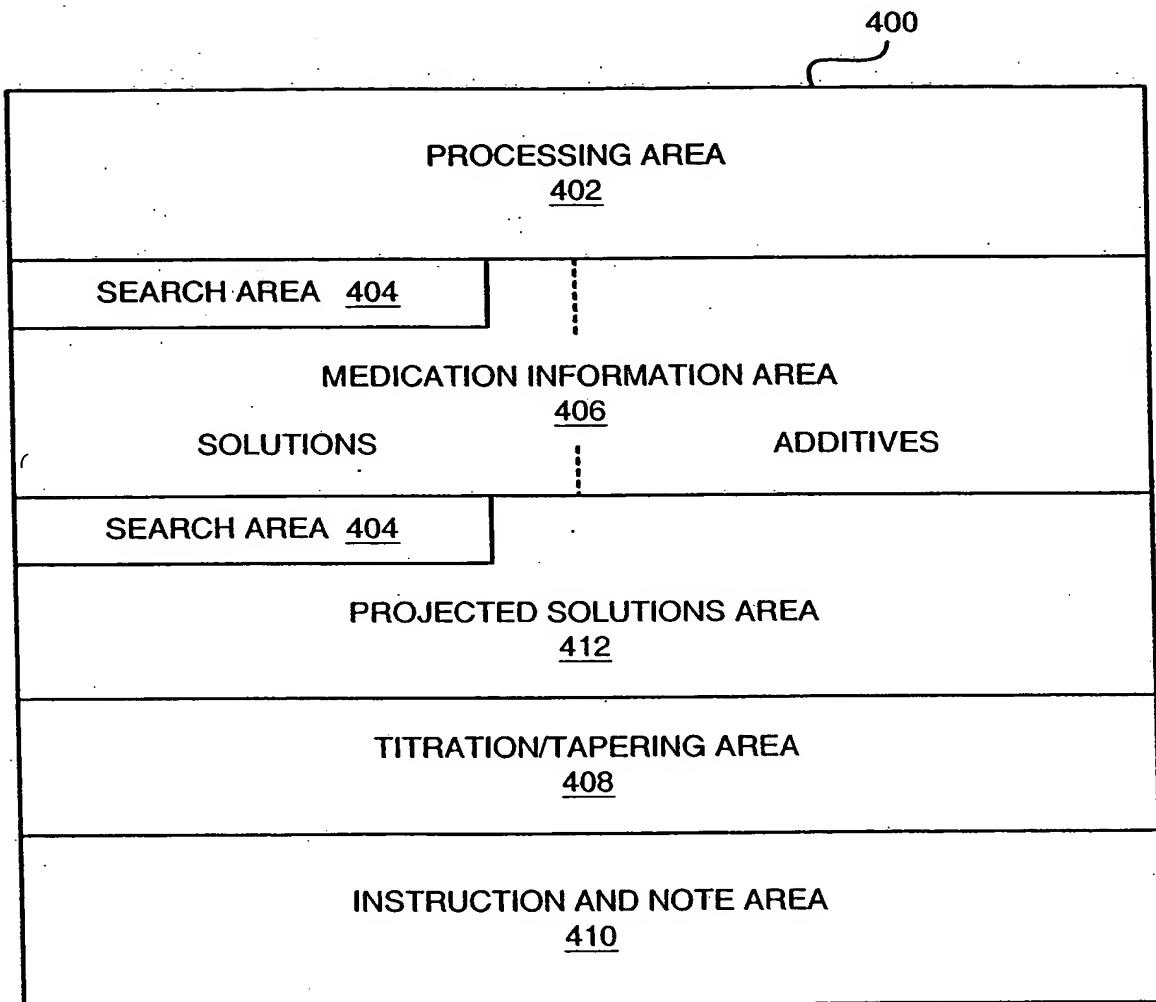


FIG. 6

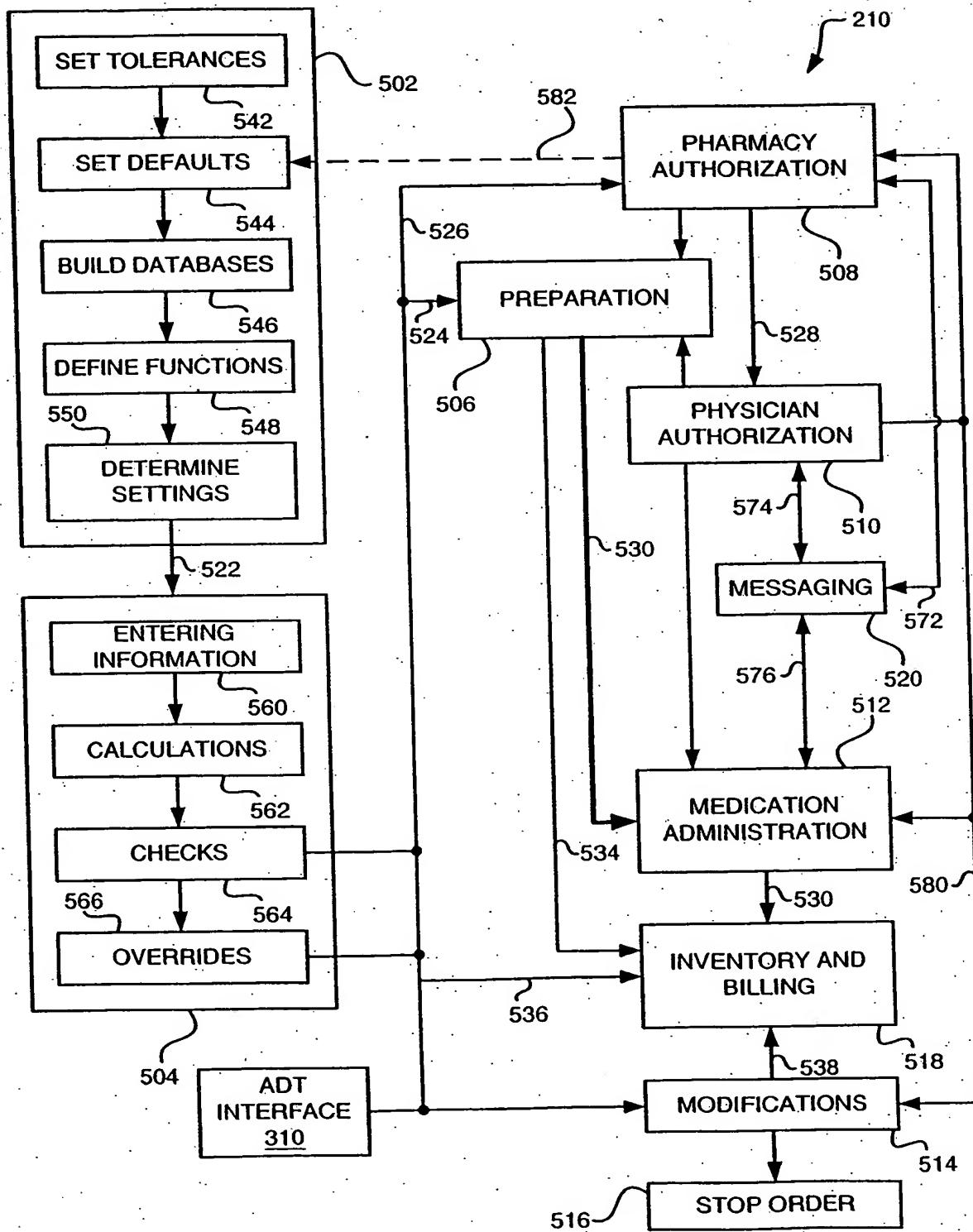


FIG. 7

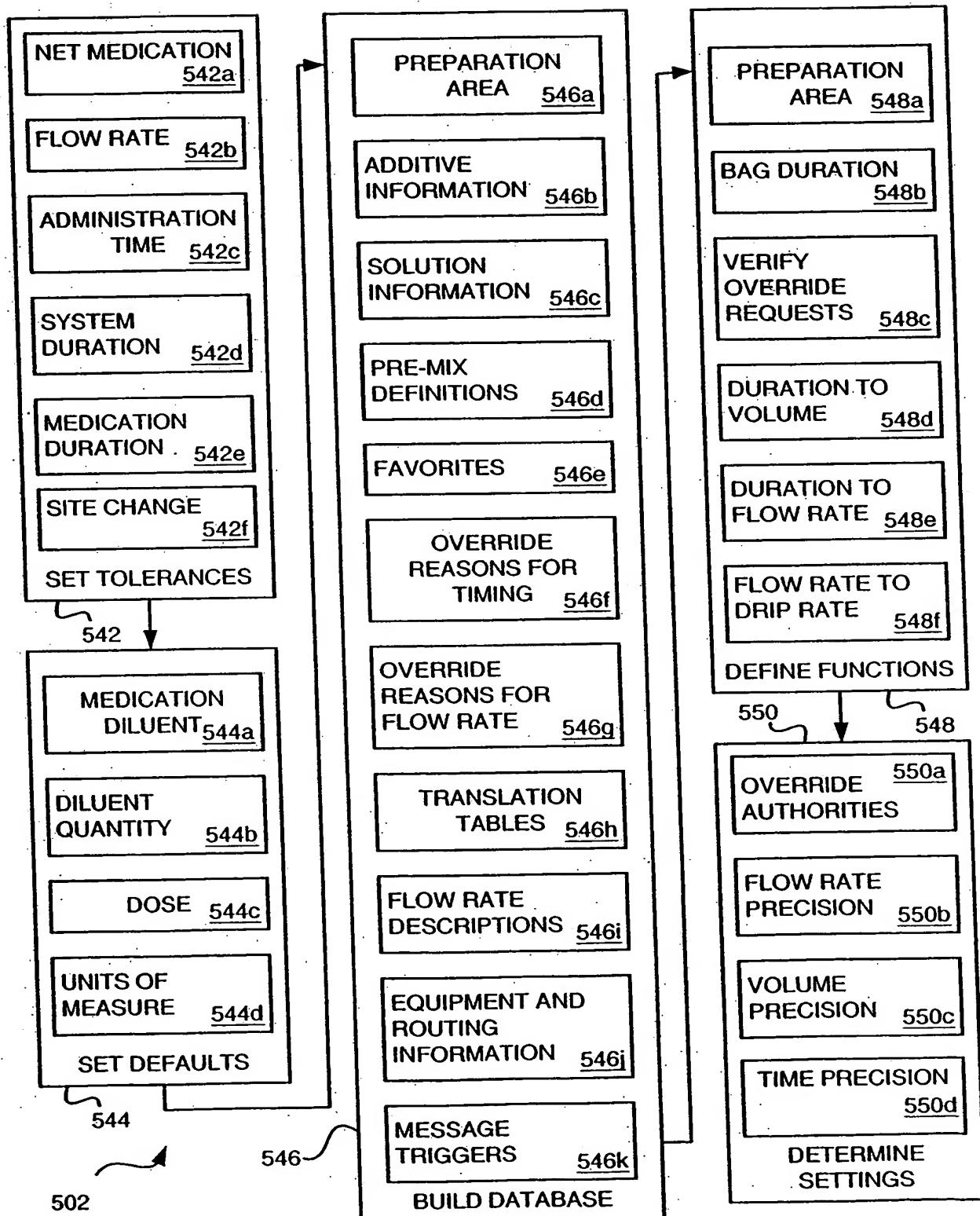


FIG. 8

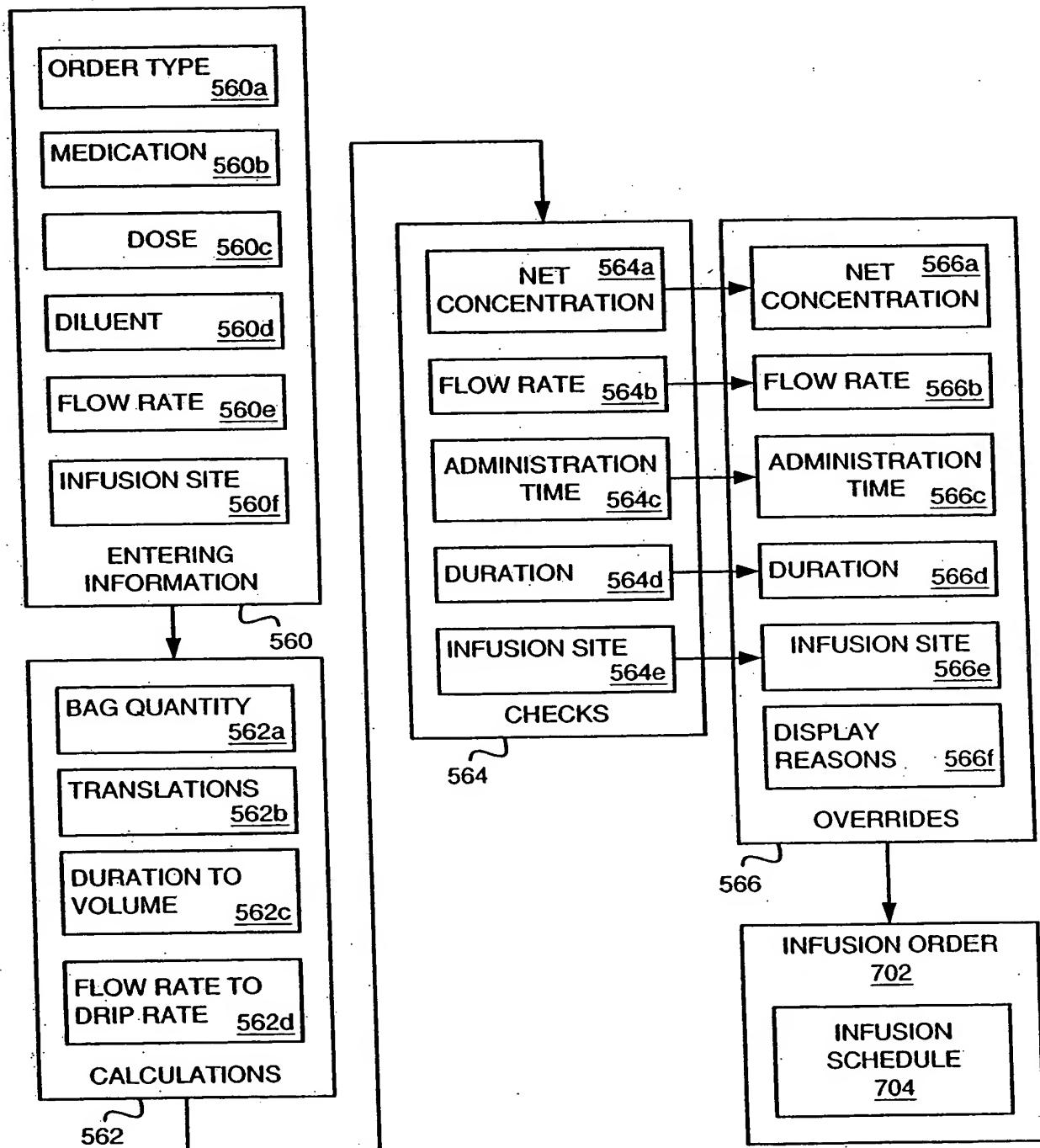


FIG. 9

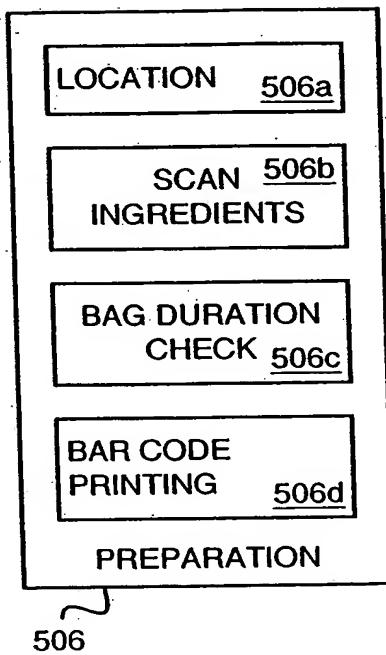
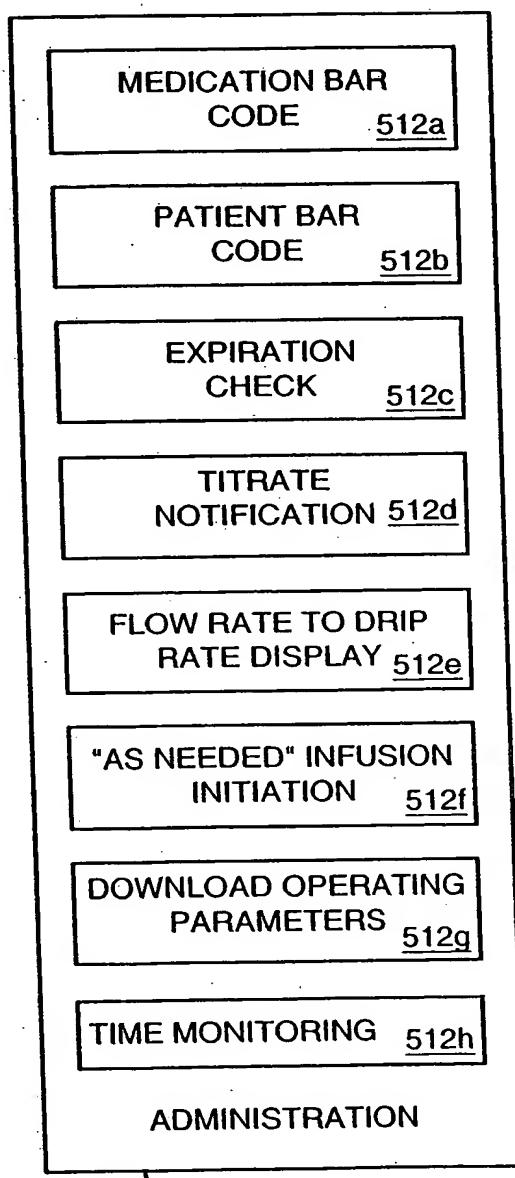


FIG. 10



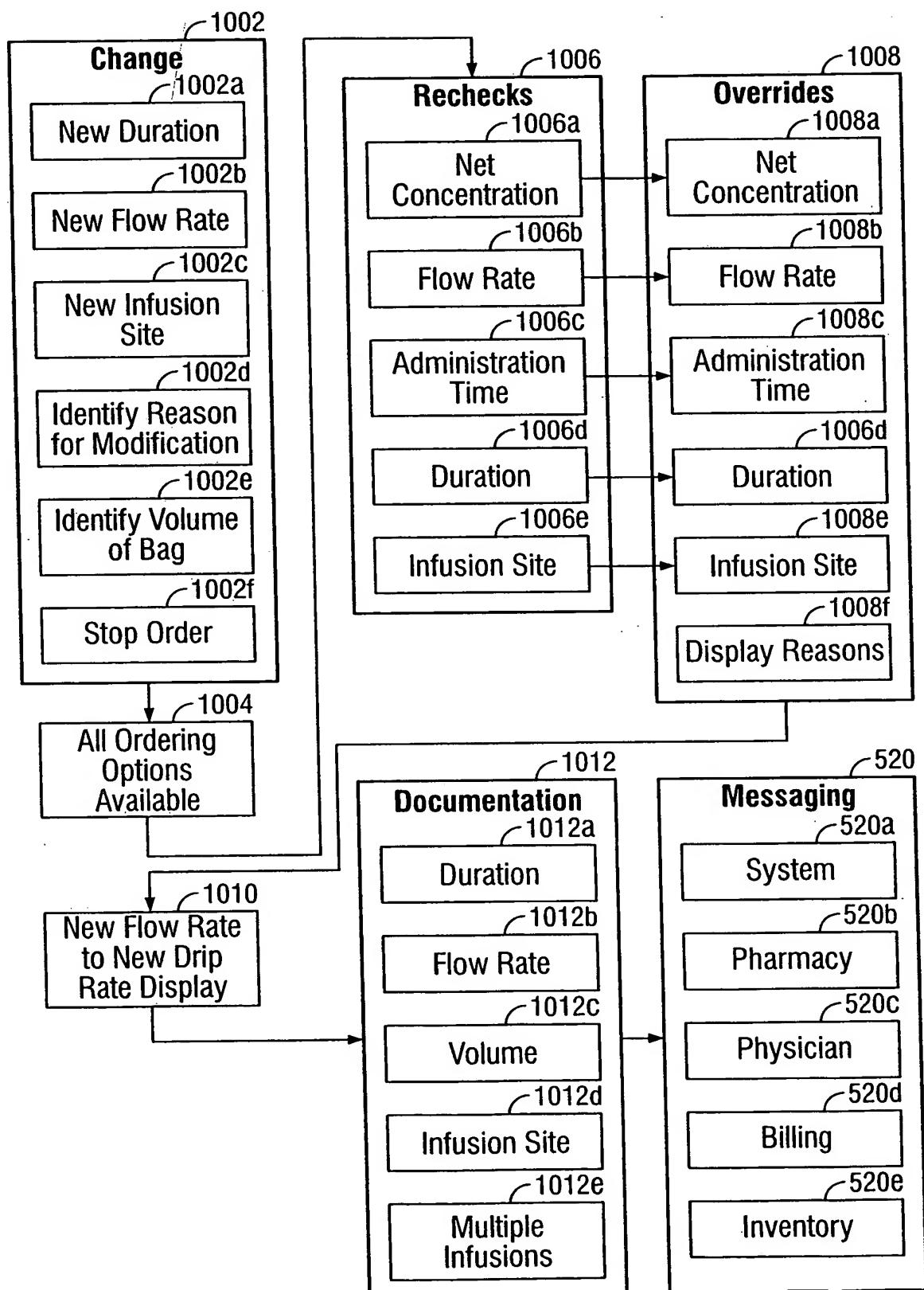


FIG. 11

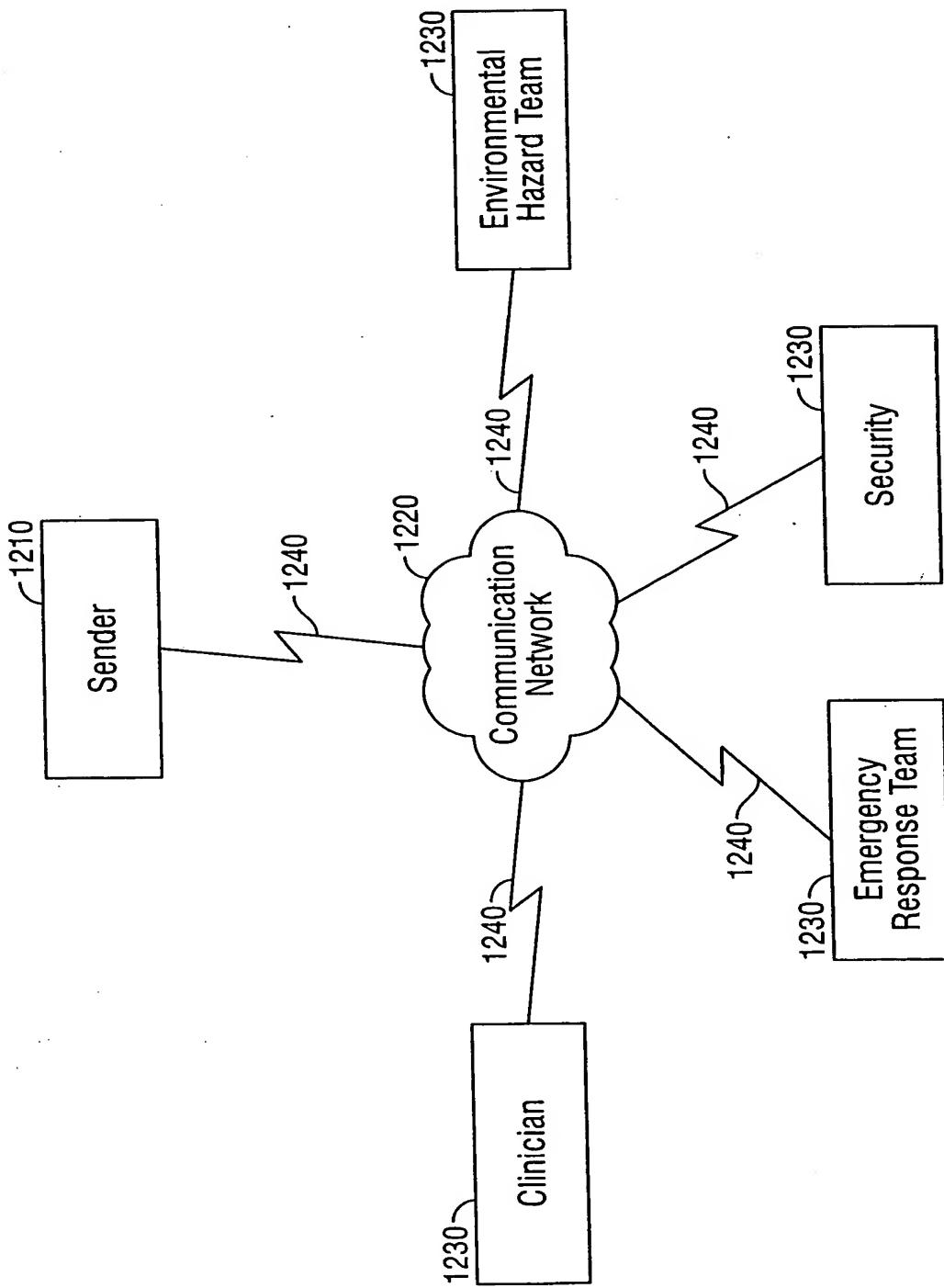


FIG. 12

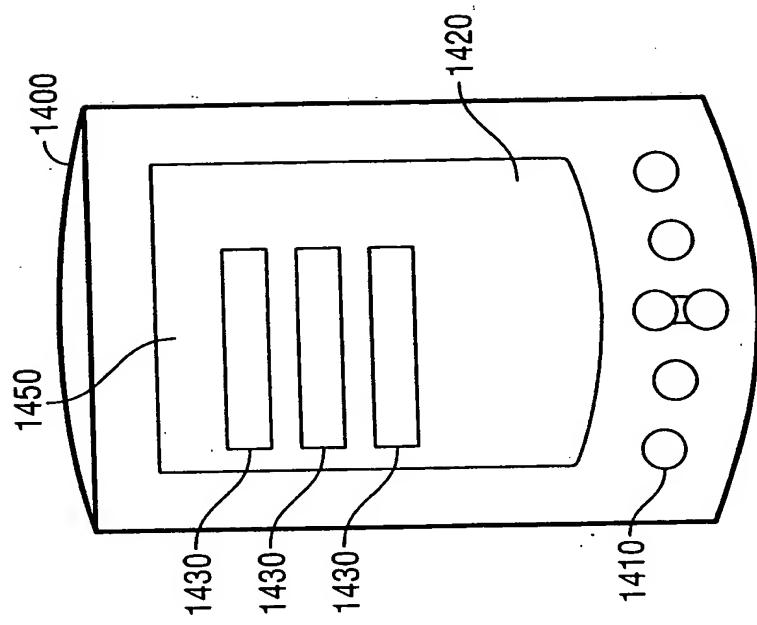


FIG. 14

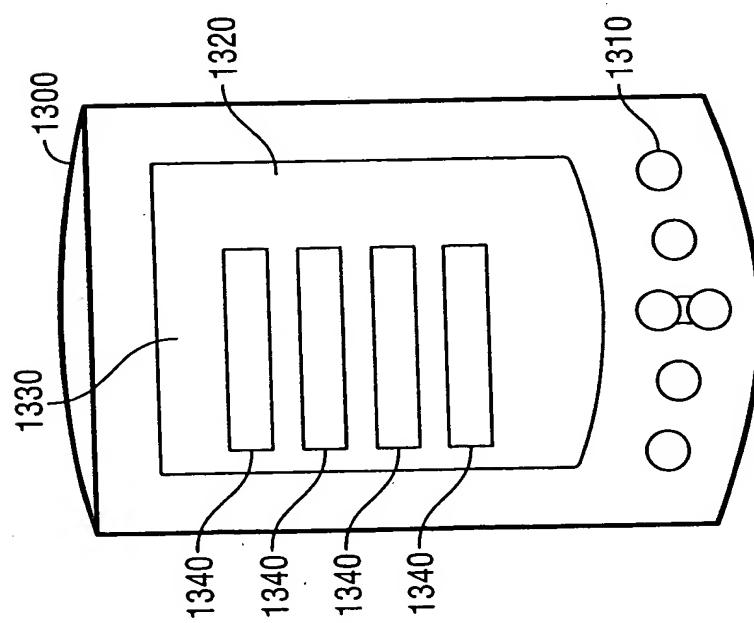
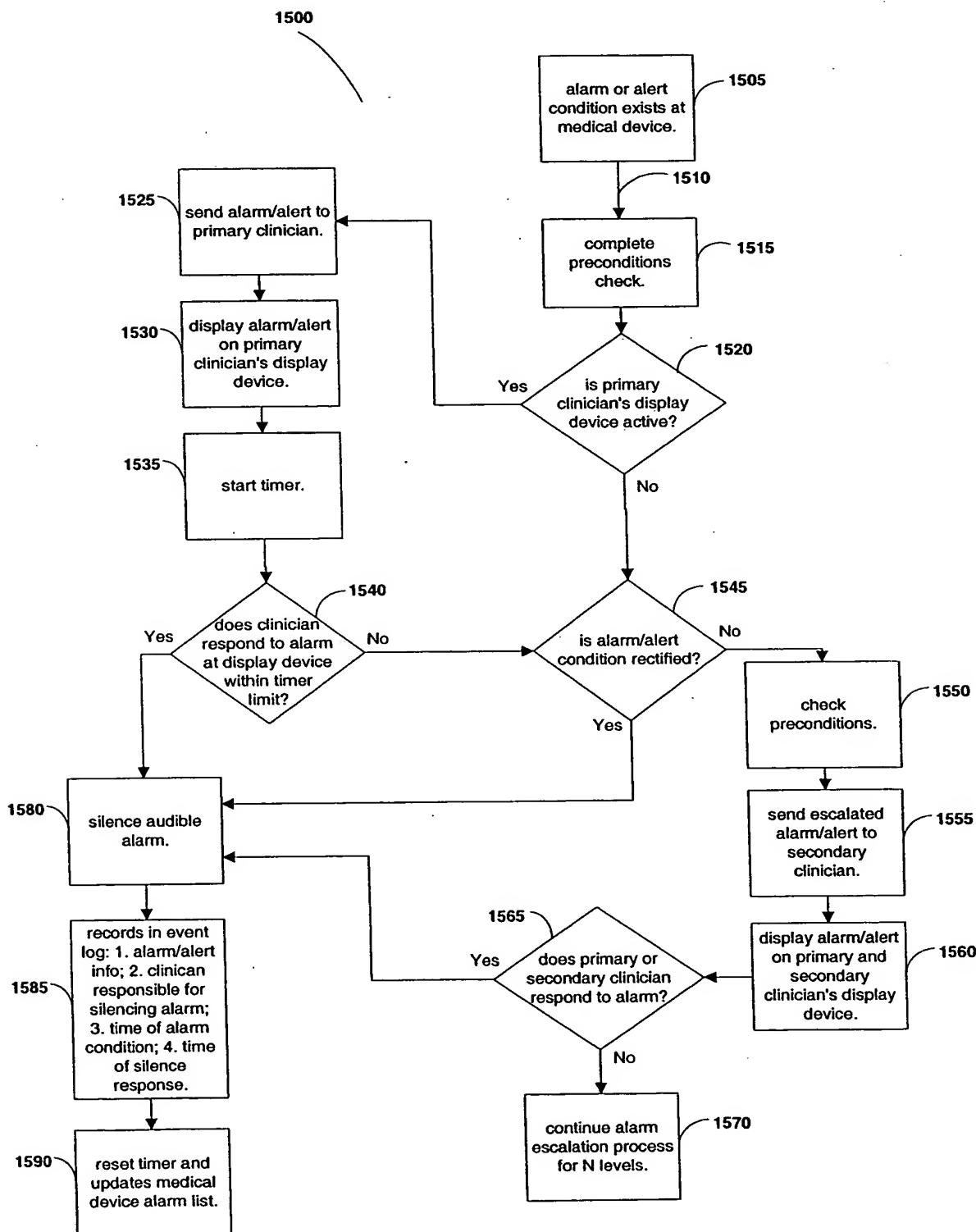


FIG. 13

FIG. 15



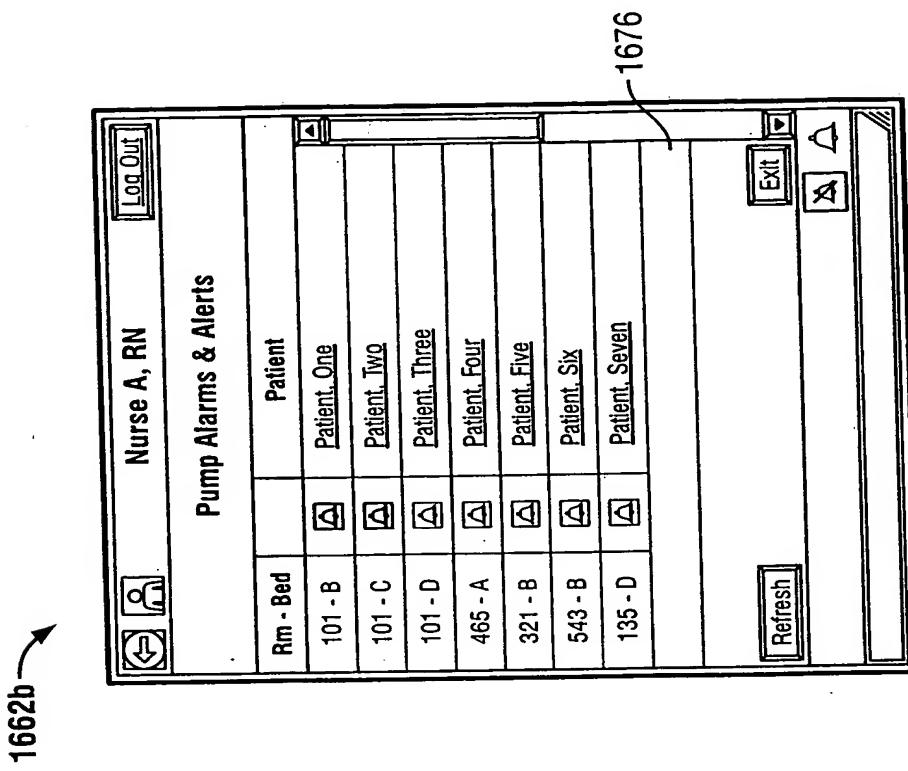


FIG. 16B

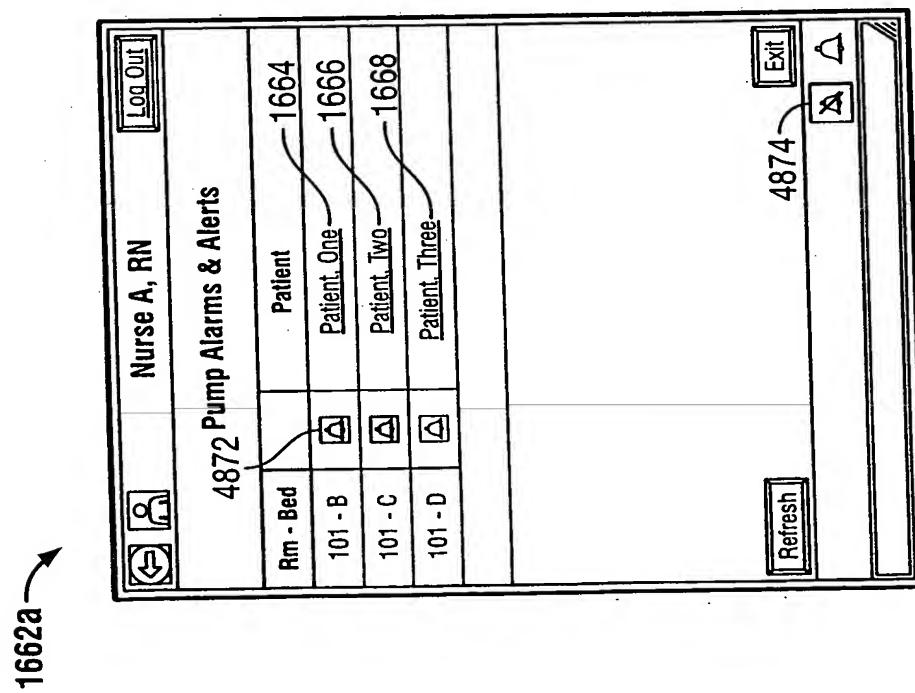


FIG. 16A

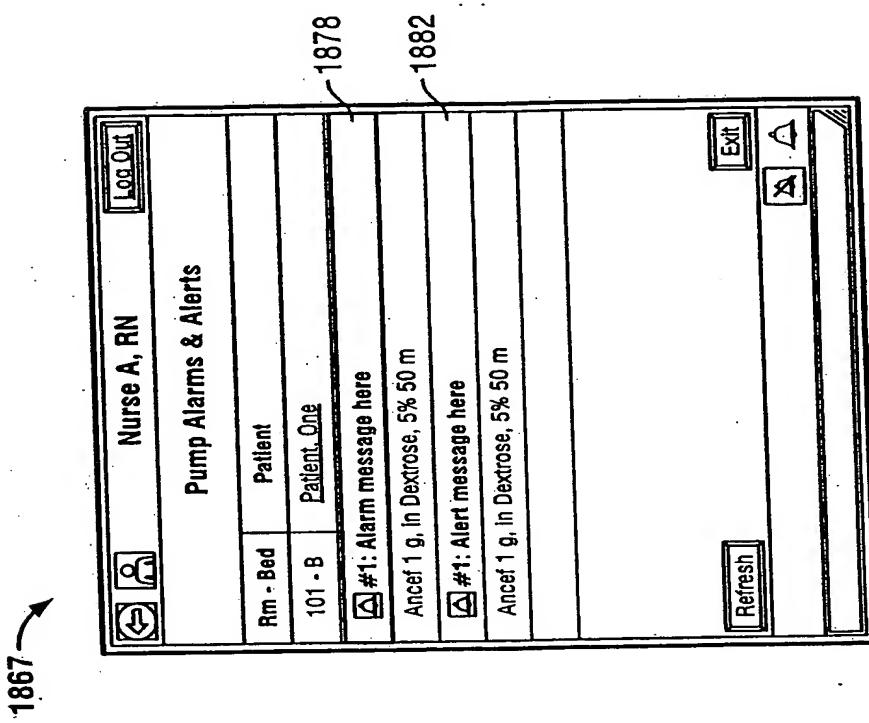


FIG. 18

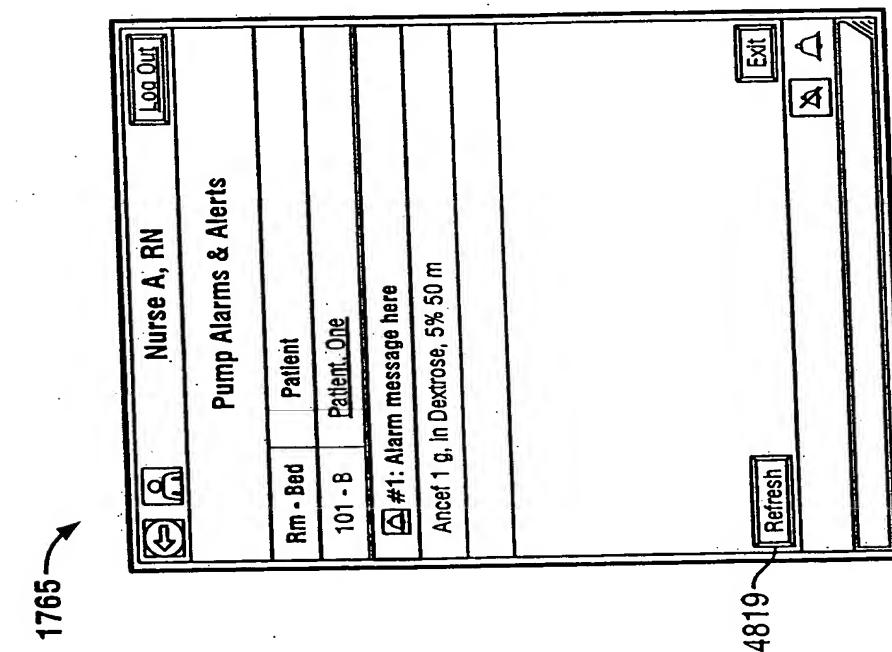


FIG. 17

2005 ↗

Patient Care System	General Hospital
<p>User Name: <input type="text" value="Nurse A"/> *</p> <p>Password: <input type="password" value="*****"/> *</p> <p>Login failed. Check User Name or Password.</p> <p><input type="button" value="Login"/></p>	

FIG. 20

1903 ↗

Patient Care System	General Hospital
<p>User Name: <input type="text" value="Nurse A"/></p> <p>Password: <input type="password" value="*****"/></p> <p><input type="button" value="Login"/></p>	

FIG. 19

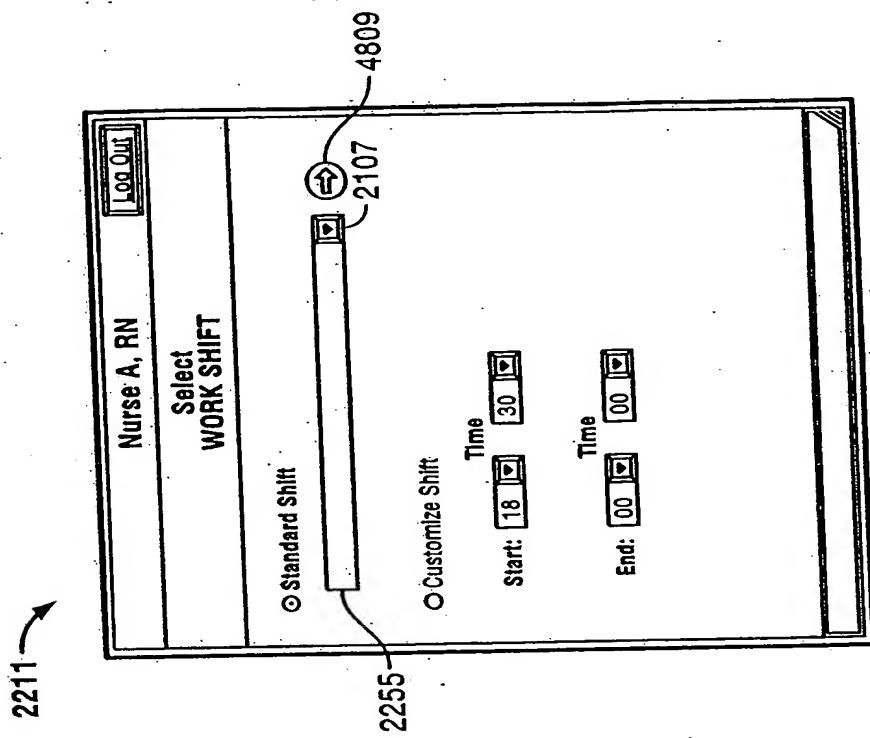


FIG. 22

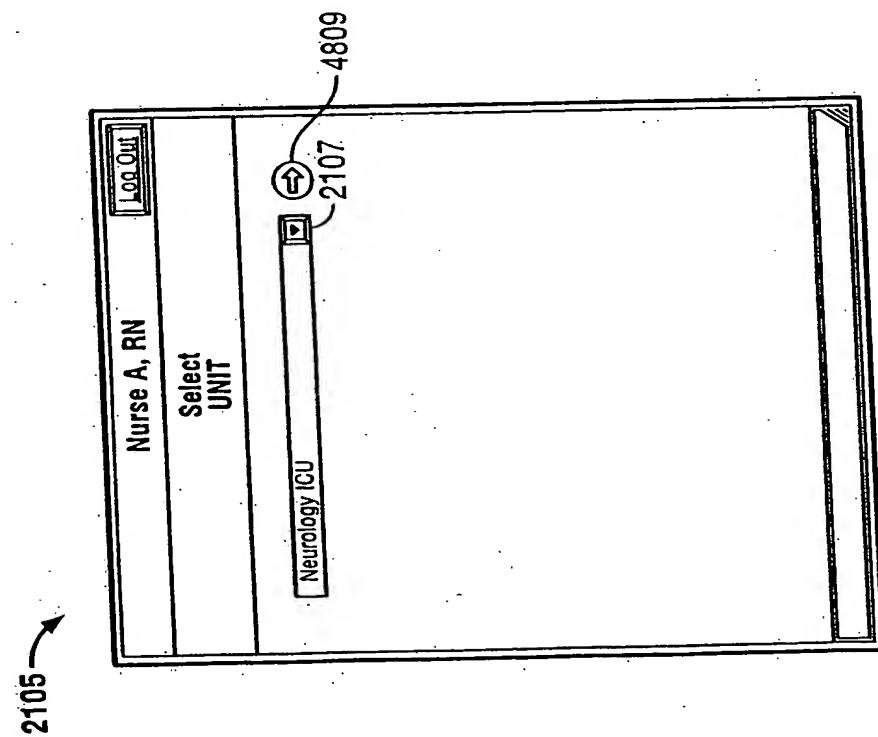


FIG. 21

2417

Nurse A, RN	
Select PATIENTS	
Rm - Bed	Patient
<input type="checkbox"/> 101 - B	Patient One
<input type="checkbox"/> 101 - C	Patient Two
<input checked="" type="checkbox"/> 101 - D	Patient Three
Add patient for: Entire shift	
Find More Patients	

FIG. 24

2313

Nurse A, RN	
My Patients	
My Tasks	
Scan Patient: <input type="text"/>	
Rm - Bed	Patient
101 - B	Patient One
101 - C	Patient Two
101 - D	Patient Three
Add More Patients	

FIG. 23

2521a

 Log Out	Nurse A, RN	Patient One - 101-B	Mini-Chart: Allergies(NKA)	Administer Meds/Infusions	STOP Infusion	RESUME Infusion	Titrate Infusion	Flow Rate HISTORY	Pulse Status	Remove Patient from Shift		
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2521

FIG. 25A

FIG. 25

2521c

Log Out

Ninety-Three, James RN

Log Out

Mr. Douglas, Mr. (MDLOC1)
 MDUnit1: MDRoom1 - MDBed1
 Dr.Ninety, Susan
 Mini-Chart Allergies
 Allergies & Ht/Wt Med Hx
 Lab Results

Lab Test	Result	Range	H/I	Date
POTASSIUM	3.1	3.6-5 mmol/L	Normal	5/16/2003 9:00:00 AM

Back

FIG. 25C

2521b

Log Out

Ninety-Three, James RN

Log Out

Mr. Douglas, Mr. (MDLOC1)
 MDUnit1: MDRoom1 - MDBed1
 Dr.Ninety, Susan
 Mini-Chart Allergies (NKA)
 Allergies & Ht/Wt Med Hx
 Lab Results

All O Scheduled O PRN O

Look Back Period: 24 hours

Order

Acetaminophen Cap 500 MG
 500 MG = 1 CAP
 Oral
 TID
 Admin Date: 6-3 12:53
 Patient Refused

More...

Back

FIG. 25B

2623 → 2627 →

Nurse A, RN

Patient, One - 101-B

Mini-Chart: Allergies (NKA)

<- 10:19 - 12:19 - ≥

SCHED 13

Time	Med	Last
11:30	MORPHINE SULFATE	12:9
	Continuous infusion	2:00
13:30	NR	2625
15:30	NR	Continuous infusion De
17:30	NR	Continuous infusion De

Nurse A, RN

Patient, One - 101-B

Mini-Chart: Allergies (NKA)

MA-Continuous Infusion
 Dextrose 5% W/Sodium Chloride 0.45%
 200 ML
 Route: Intravenous
 Flow Rate: 50 ML/H
 Estimated Admin. Period: 4 Hours

Warning : Wear Gloves

① Show Edubyte info here

RX not previously administered
 Start Time: 6-2 14:54
 End Time: 7-7 14:54

2629 → 2631 → 2633

FIG. 26

FIG. 26A

2727b

Log Out	
Ninety-Three, James RN	
<input type="button" value="Scan"/> <input type="button" value="Print"/> WORKFLOW INFUSION: STOP Ninety-Six, Samuel, Mr. MDRoom1- MDBed1 <input type="button" value="Mini-Chart"/> Allergies	
Continuous Infusion Dextrose Inj 20% 500 ML Route: Intravenous Flow Rate: 125 ML/H Estimated Administration Period: 4 Hours	
Please select a reason for Stop <input type="checkbox"/> Discontinue order in system	
<input type="button" value="Scan Item:"/> <input type="button" value="Print"/> Stop Time [M/D/Y HH:MM] 06/18/2003 <input type="checkbox"/> 15 <input type="checkbox"/> 23 <input type="button" value="Cancel"/> <input type="button" value="Back to Patient list"/>	

2727a

Log Out	
Ninety-Three, James RN	
<input type="button" value="Scan"/> <input type="button" value="Print"/> WORKFLOW INFUSION: STOP Ninety-Six, Samuel, Mr. MDRoom1- MDBed1 <input type="button" value="Mini-Chart"/> Allergies	
Continuous Infusion Dextrose Inj 20% 500 ML Route: Intravenous Flow Rate: 125 ML/H Estimated Administration Period: 4 Hours Order has been DC'd	
<input type="button" value="Scan Item:"/> <input type="button" value="Print"/> Back to Patient list	

FIG. 27B

FIG. 27A

2727d

Ninety-Three, James RN Log Out

WORKFLOW INFUSION: RESUME
 Ninety-four-Pointfive, Fred, Mr.
 MDRoom1 - MDBed1

Mini-Chart: Allergies (Not Specified)

Continuous Infusion
 Dextrose Inf 20%
 500 ML
 Route: Intravenous Flow Rate:
 125 ML/H
 Estimated Administration Period:
 4 Hours

Stopped w/o Order
 Please select a reason for Resuming
 Infusion
 Site re-established

4809

Scan Item: 

Cancel Back to Patient List

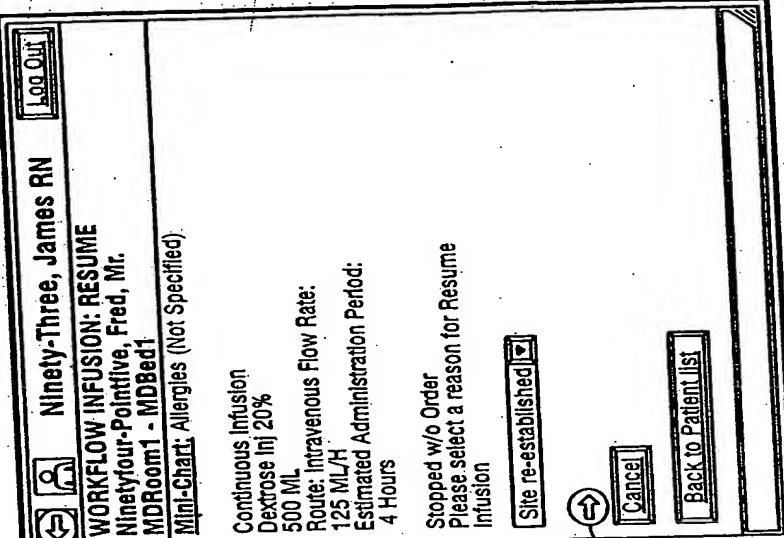


FIG. 27D

2727c

Ninety-Three, James RN Log Out

WORKFLOW INFUSION: RESUME
 Ninety-four-Pointfive, Fred, Mr.
 MDRoom1 - MDBed1

Mini-Chart: Allergies (Not Specified)

Continuous Infusion
 Dextrose Inf 20%
 500 ML
 Route: Intravenous Flow Rate: 125
 ML/H
 Estimated Administration Period: 4
 Hours

Stopped w/o Order

Back to Patient List

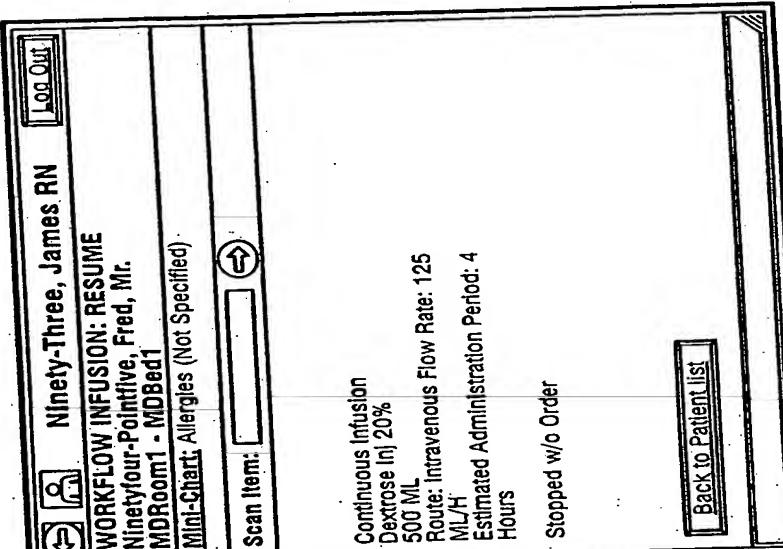


FIG. 27C

2941

Nurse A, RN

Patient, One - 101-B

Mini-Chart: Allergies (NKA)

2943

Missed Medication

Please select a reason for LATE:

Adjust schedule for :

MORPHINE SULFATE

Continuous Infusion

60 MG = 30 ML

Route: Injection

Flow Rate: 30 ML/H

Estimated Admin. Period: 1 Hour

4837

2945

2835

Nurse A, RN

Patient, One - 101-B

Mini-Chart: Allergies (NKA)

<- 10:19 - 12:19 - 2

SCHED 13

Time	Med	Last
13:30	MORPHINE SULFATE Continuous Infusion	12:9 2:00
13:30	Continuous Infusion (De)	
15:30	Continuous Infusion (De)	
17:30	Continuous Infusion (De)	

2839

4837

FIG. 28

FIG. 29

3047

3135

3047 Screen Content:

Nurse A, RN

Patient, One - 101-B

Mini-Chart : Allergies (NKA)

Missed Medication

Please select a reason for LATE

Patient unavailable at sched. time

Not Required

Cycle Count

Insufficient Stock

Re-open drawer

Maintain Admin Test

Already have item

Item Unavailable

Refused

3135 Screen Content:

Nurse A, RN

Patient, One - 101-B

Mini-Chart : Allergies (NKA)

<- 10:19 - 12:19 - 2

SCHED 13

	Time	Med	Last
<input type="checkbox"/>	13:30	MORPHINE SULFATE Continuous Infusion	12:9 2:00
<input type="checkbox"/>	13:30	NR	2839
<input type="checkbox"/>	13:30	NR	Continuous Infusion De
<input type="checkbox"/>	15:30	NR	Continuous Infusion De
<input type="checkbox"/>	17:30	NR	Continuous Infusion De

FIG. 31

FIG. 30

3351 ↗

Nurse A, RN Log Out

Patient, One - 101-B

Mini-Chart : Allergies (NKA)

Scan Depot: 

Search Items 

Item	Dept/Unit	Qty
Morphine Sulfate Inj	In other units	
2 MG/ML QA		
Morphine Sulfate Inj	In other units	
2 MG/ML QA		

 Skip Scan Depot

3353 ↗

3355 ↗

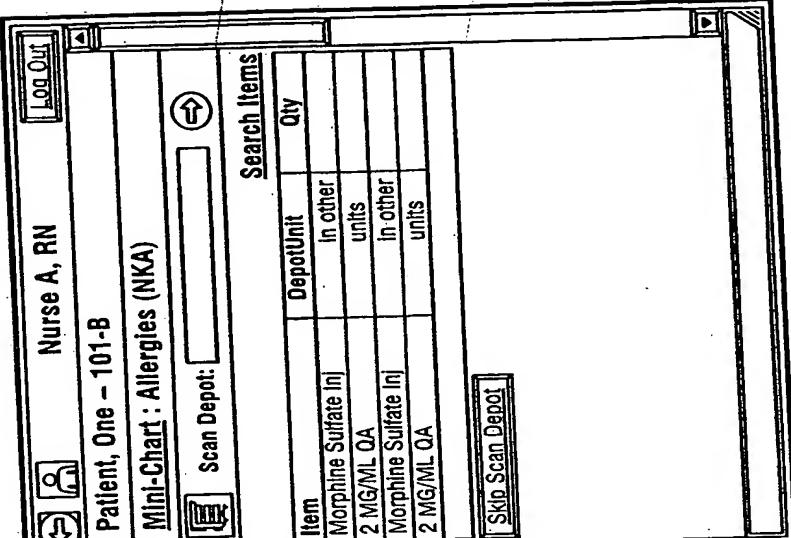


FIG. 33

3235 ↗

Nurse A, RN Log Out

SCHED 13

Time	Med	Last
11:30	MORPHINE SULFATE Continuous infusion	12/9 2:00
13:30	Continuous infusion (De SI)	3225
15:30	Continuous infusion (De SI)	
17:30	Continuous infusion (De SI)	

Get Items

3249 ↗

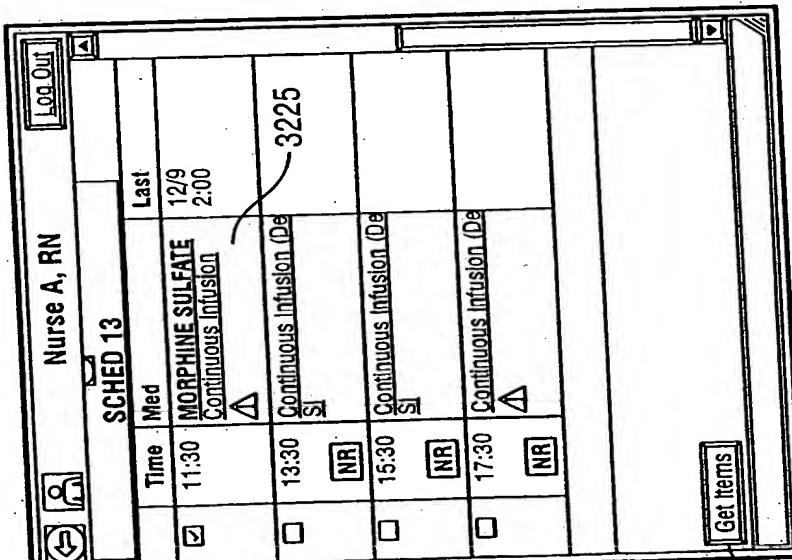


FIG. 32

3569 ↗

<input type="button" value="Log Out"/>	Nurse A, RN
<input type="button" value="Patient, One - 101-B"/>	
<input type="button" value="Mini-Chart : Allergies (NKA)"/>	
<input type="button" value="Scan Depot: []"/>	<input type="button" value="Scan"/>
Scan code is invalid.	
Search Items	
Item	Depot/Unit
Morphine Sulfate Inj	In other units
2 MG/ML QA	
Morphine Sulfate Inj	In other units
2 MG/ML QA	

FIG. 35

3465 ↗

3467 ↗

<input type="button" value="Log Out"/>	Nurse A, RN
<input type="button" value="Patient, One - 101-B"/>	
<input type="button" value="Mini-Chart : Allergies (NKA)"/>	
<input type="button" value="Scan Item: []"/>	<input type="button" value="Scan"/>
MORPHINE SULFATE	
Continuous Infusion	
60 MG = 30 ML	
Route: Injection	
Flow Rate: 30 ML/H	
Estimated Admin. Period: 1 Hour	
Quantity: <input type="text" value="30"/>	ML(s)
Get: 30 ML	
Warning: Wear Gloves	
<input type="checkbox"/> Show Edulysate Info here	

FIG. 34

3771 ↗

<input type="checkbox"/>	Nurse C, RN
<input type="checkbox"/>	Log Out
Patient, Three , Mr. 100-C	
Mini-Chart : Allergies	
Verify Route, Line & Site	
Rx Sodium Chloride 0.9% Continuous Infusion Rx Sodium Chloride 0.9% 1000 ML Route: Intravenous Flow Rate: 50 ML/H Estimated Administration Period: 20 Hours	
Please hang the bag, program the pump and record the following information but DO NOT start the pump channel until instructed:	
Route:	<input type="checkbox"/> Intramuscular
Line:	<input type="checkbox"/> Central
Site:	<input type="checkbox"/> Right Forearm
Compare Route	

4817 ↗

3778 ↗

FIG. 37

3657 ↗

<input type="checkbox"/>	Nurse A, RN
<input type="checkbox"/>	Log Out
Patient, One - 101-B	
Mini-Chart : Allergies (NKA)	
<input type="checkbox"/>	Scan Patient: <input type="text"/>
<input type="checkbox"/>	3661 ↗
If Cannot admin, select a reason:	
<input type="checkbox"/>	3659 ↗
Not Req Due to Monitoring Result	
Patient Unavailable	
Refused	
Waste/Return	

3663 ↗

FIG. 36

3885 ↗

	Nurse C, RN	
Patient, Three, Mr. 100-C		
Mini-Chart: Allergies		
Scan Pump Channel		
Rx Sodium Chloride 0.9% Continuous Infusion Rx Sodium Chloride 0.9% 1000 mL Route: Intravenous Flow Rate: 50 mL/H Estimated Administration Period: 20 Hours		
Scan Pump Channel 4809		

FIG. 38A

3881 ↗

	Nurse C, RN	
Patient, Three, Mr. 100-C		
Mini-Chart: Allergies		
Select Pump Channel Mode		
Rx Sodium Chloride 0.9% Continuous Infusion 3882 Rx Sodium Chloride 0.9% 1000 mL Route: Intravenous Flow Rate: 50 mL/H Estimated Administration Period: 20 Hours		
Select Pump Channel Mode: Primary 3884 Playback 3883		

FIG. 38

3987 ↗

<input type="button" value="Log Out"/>	Nurse A, RN									
<input type="button" value="Patient"/>	Patient, One Rm - Bed 101-B Dr. One (111)111-1111 ext. 1									
<input type="button" value="Pharm & Pump Comparison"/>	Pharm & Pump Comparison									
Ancef 1 G. In Dextrose, 5% 50 mL run at 100 mL/hr										
<table border="1"> <tr> <td>Pharm</td> <td>=</td> <td>Pump</td> </tr> <tr> <td>Label</td> <td></td> <td>Settings</td> </tr> <tr> <td>Rate</td> <td>100 mL/hr</td> <td>100 mL/hr</td> </tr> </table>		Pharm	=	Pump	Label		Settings	Rate	100 mL/hr	100 mL/hr
Pharm	=	Pump								
Label		Settings								
Rate	100 mL/hr	100 mL/hr								
<input type="button" value="OK"/>										

FIG. 39A

3986 ↗

<input type="button" value="Log Out"/>	Nurse C, RN
<input type="button" value="Patient"/>	Patient, Three, Mr. 1 West, 100-C MD1, Test
<input type="button" value="Pharm & Pump Comparison"/>	Pharm & Pump Comparison
Continuous Infusion Rx Sodium Chloride 0.9% 1000 mL Route: Intravenous Flow Rate: 50 mL/hr Estimated Administration Period: 28 hours	
Program the Pump Channel and: > If this is a PRIMARY Click COMPARE below Now and wait until instructed to start pump channel.	
> If this is a PIGGYBACK ... Click COMPARE below Now and wait until instructed to start pump channel.	
Press the "start" key on the pump. Now, then Click COMPARE If Piggyback infusion, ensure PRIMARY is placed LOWER THAN than PIGGYBACK and that PIGGYBACK roller clamp is OPEN.	
<input type="button" value="Compare"/>	
4817	

FIG. 39

4187 ↗

Nurse A, RN		Log Out												
Patient, One Rm - Bed 101-B Dr. One (111)111-1111 ext. 1 Pharm & Pump Comparison														
Amecl 1 g. In Dextrose, 5% 50 mL run at 100 mL/hr														
<table border="1" style="width: 100%;"> <tr> <td style="width: 33.33%;">Pharm</td> <td style="width: 33.33%;">Pump</td> <td style="width: 33.33%;">?</td> </tr> <tr> <td>Label</td> <td>Settings</td> <td></td> </tr> <tr> <td colspan="3" style="text-align: center;">Rate</td> </tr> <tr> <td>100 mL/hr</td> <td>50 mL/hr</td> <td>7 mL/hr</td> </tr> </table>			Pharm	Pump	?	Label	Settings		Rate			100 mL/hr	50 mL/hr	7 mL/hr
Pharm	Pump	?												
Label	Settings													
Rate														
100 mL/hr	50 mL/hr	7 mL/hr												
Cannot Compare. Press "Rate" key and COMPARE.														
4817 COMPARE														

FIG. 41

4087 ↗

4825 ↗

Nurse A, RN		Log Out												
Patient, One Rm - Bed 101-B Dr. One (111)111-1111 ext. 1 Pharm & Pump Comparison														
Amecl 1 g. In Dextrose, 5% 50 mL run at 100 mL/hr														
<table border="1" style="width: 100%;"> <tr> <td style="width: 33.33%;">Pharm</td> <td style="width: 33.33%;">Pump</td> <td style="width: 33.33%;">?</td> </tr> <tr> <td>Label</td> <td>Settings</td> <td></td> </tr> <tr> <td colspan="3" style="text-align: center;">Rate</td> </tr> <tr> <td>100 mL/hr</td> <td>50 mL/hr</td> <td>7 mL/hr</td> </tr> </table>			Pharm	Pump	?	Label	Settings		Rate			100 mL/hr	50 mL/hr	7 mL/hr
Pharm	Pump	?												
Label	Settings													
Rate														
100 mL/hr	50 mL/hr	7 mL/hr												
Please Verify with PHYSICIAN Order. Then to accept the mismatch, press "Start" key on pump and then click "OK" below. You can also reprogram the pump and then click "Compare again."														
4817 OK Compare again														

FIG. 40

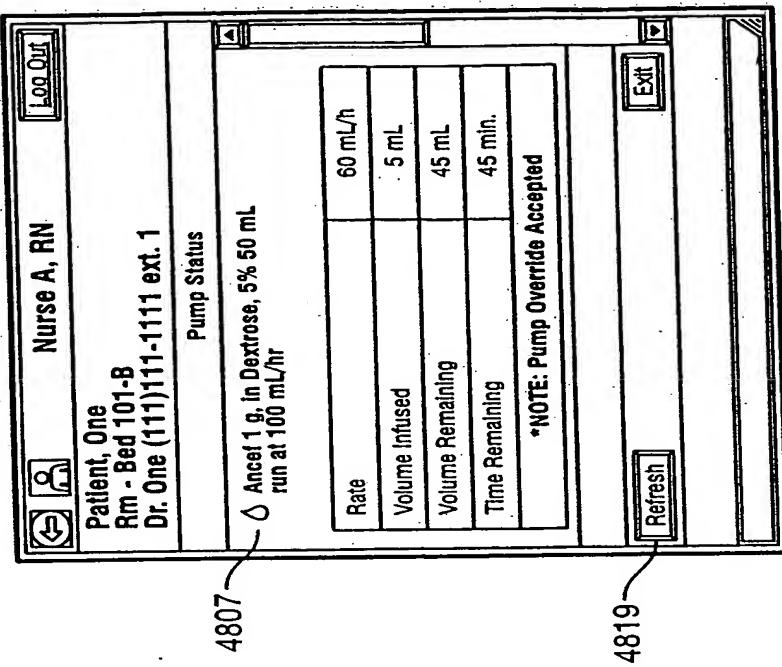


FIG. 43

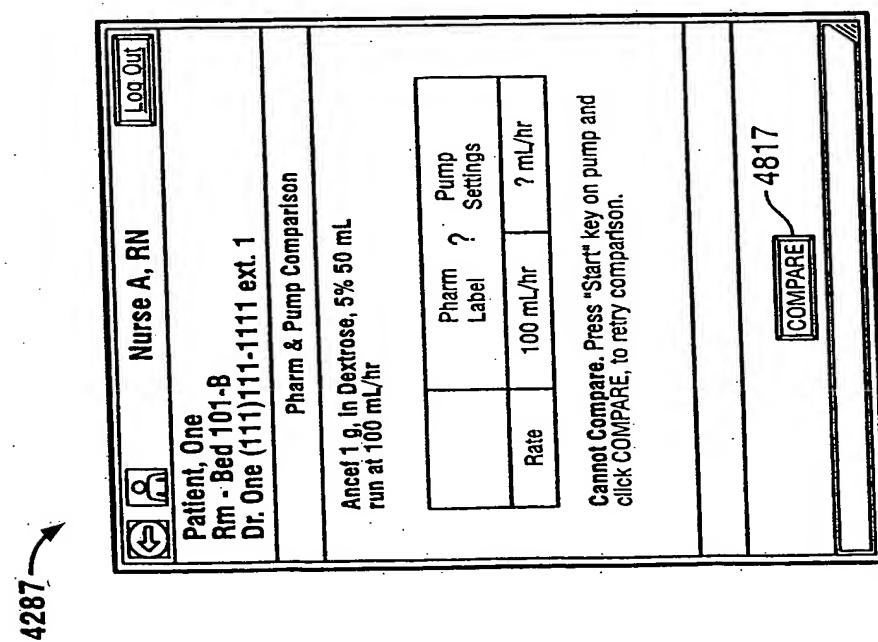


FIG. 42

4501 ↗

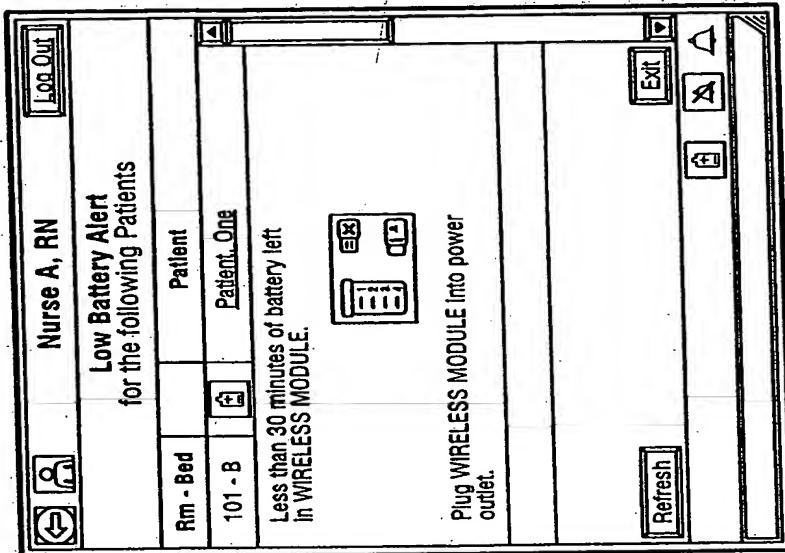
Nurse A, RN		Log Out
Communication Loss Alert for the following Patients		
Rm - Bed	Patient	
101 - B	<input checked="" type="checkbox"/> Patient, One	
101 - C	<input checked="" type="checkbox"/> Patient, Two	
101 - D	<input checked="" type="checkbox"/> Patient, Three	
Trouble Shooting Tips: If a Yellow light is flashing on the WIRELESS MODULE and it is beeping, the system may be down. Call IT or Biomed. - OR - Plug in and turn on all pumps. If that does not resolve the problem, Call IT or Biomed.		

FIG. 45A

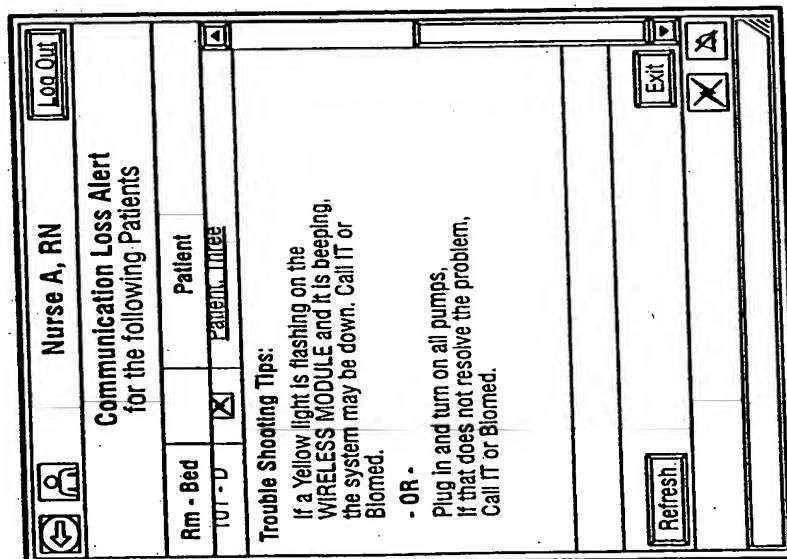
4493 ↗

Nurse A, RN		Log Out
Patient, One Rm - Bed 101-B Dr. One (111)111-1111ext. 1		
Flow Rate History		
Δ Ancef 1 g. In Dextrose, 5% 50 mL run at 100 mL/hr		
60 mL/h @ 10:55 AM 3/13 70 mL/h @ 10:55 AM 3/13 80 mL/h @ 10:54 AM 3/13		
Exit		
Refresh		

FIG. 44



4603



4501

FIG. 46

FIG. 45B

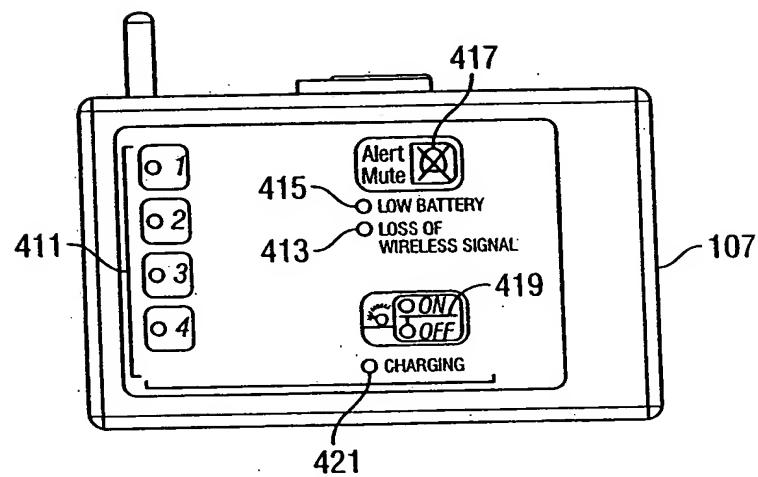


FIG. 47

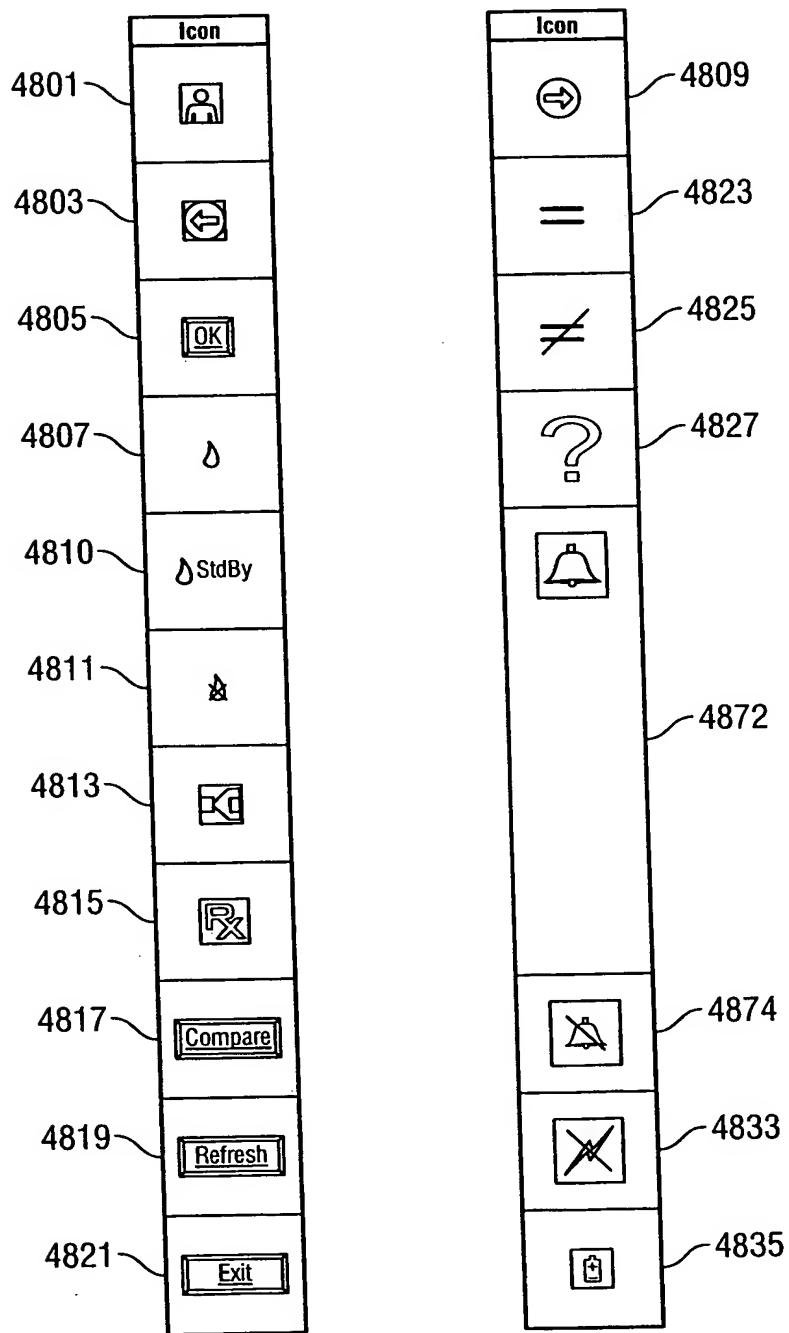


FIG. 48

FIG. 49

FIG. 50A

	Time	Med	Last
<input type="checkbox"/>	14:39	Digoxin Tab 0.125 MG 0.125 MG = 1 TAB QD 1 MP	

FIG. 50

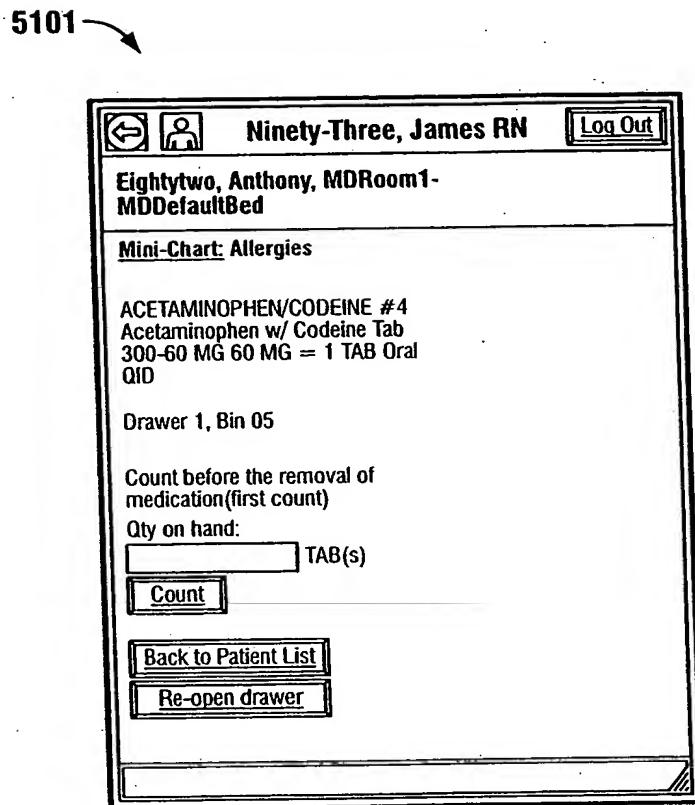
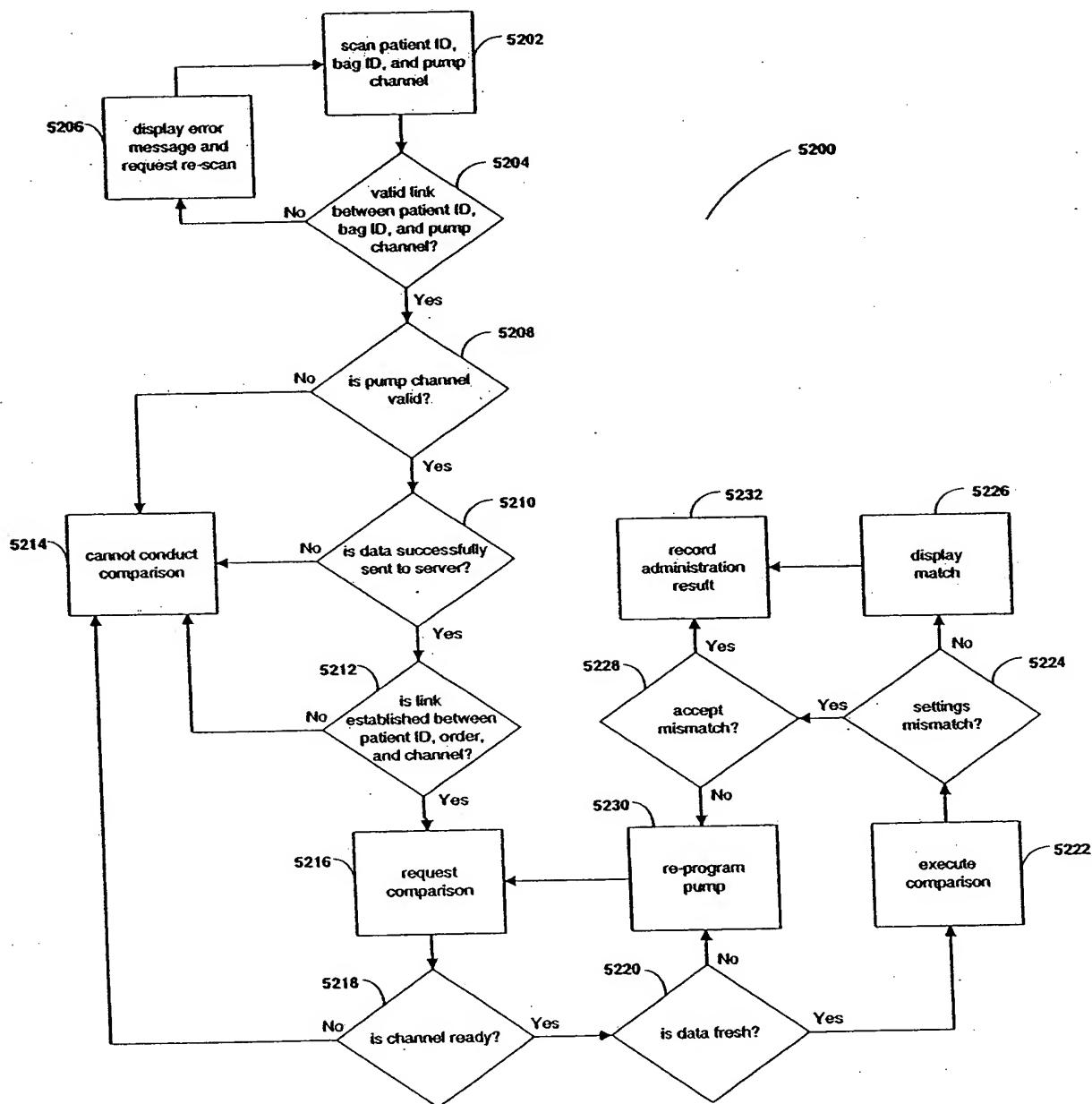
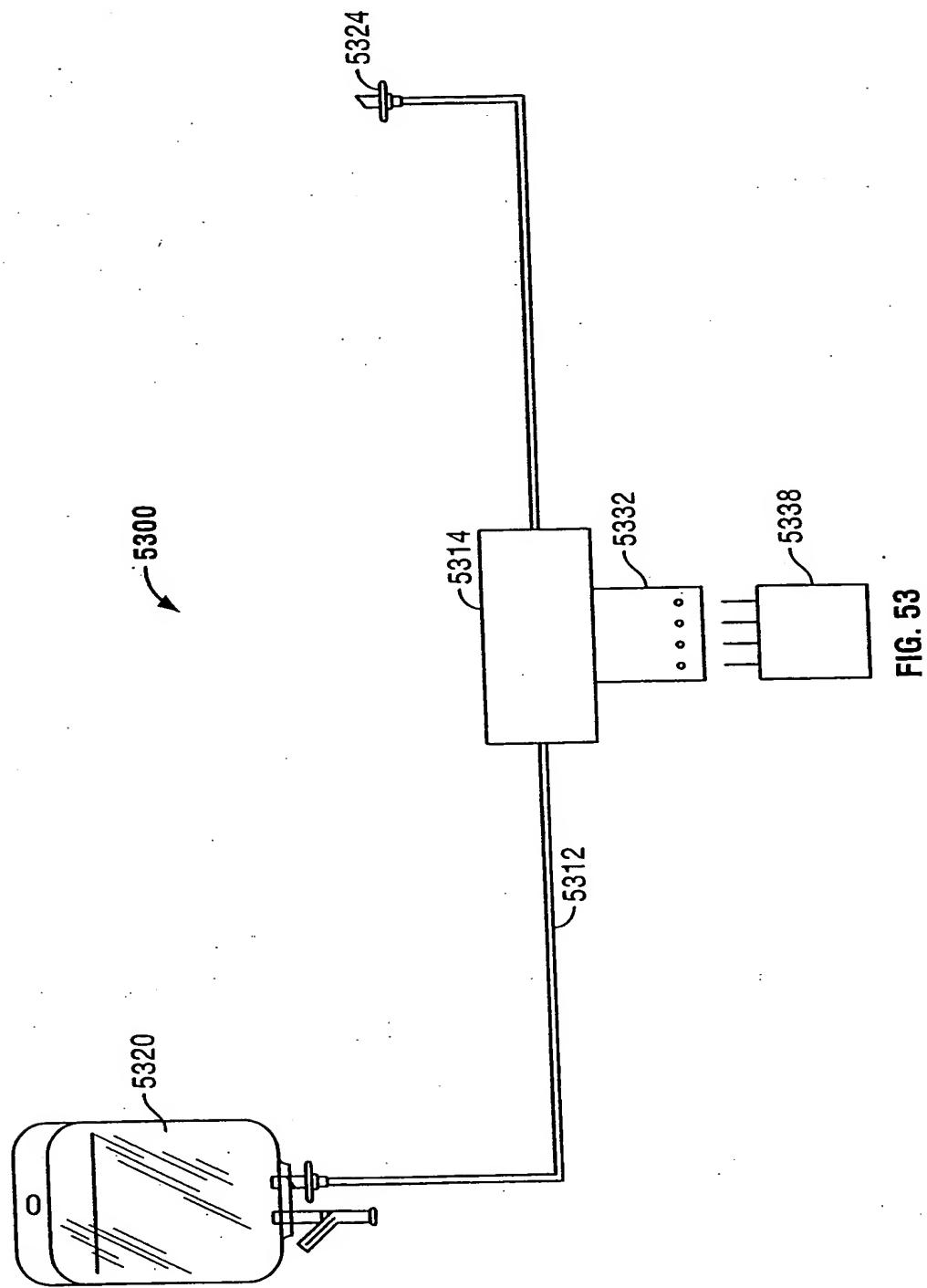


FIG. 51

FIG. 52





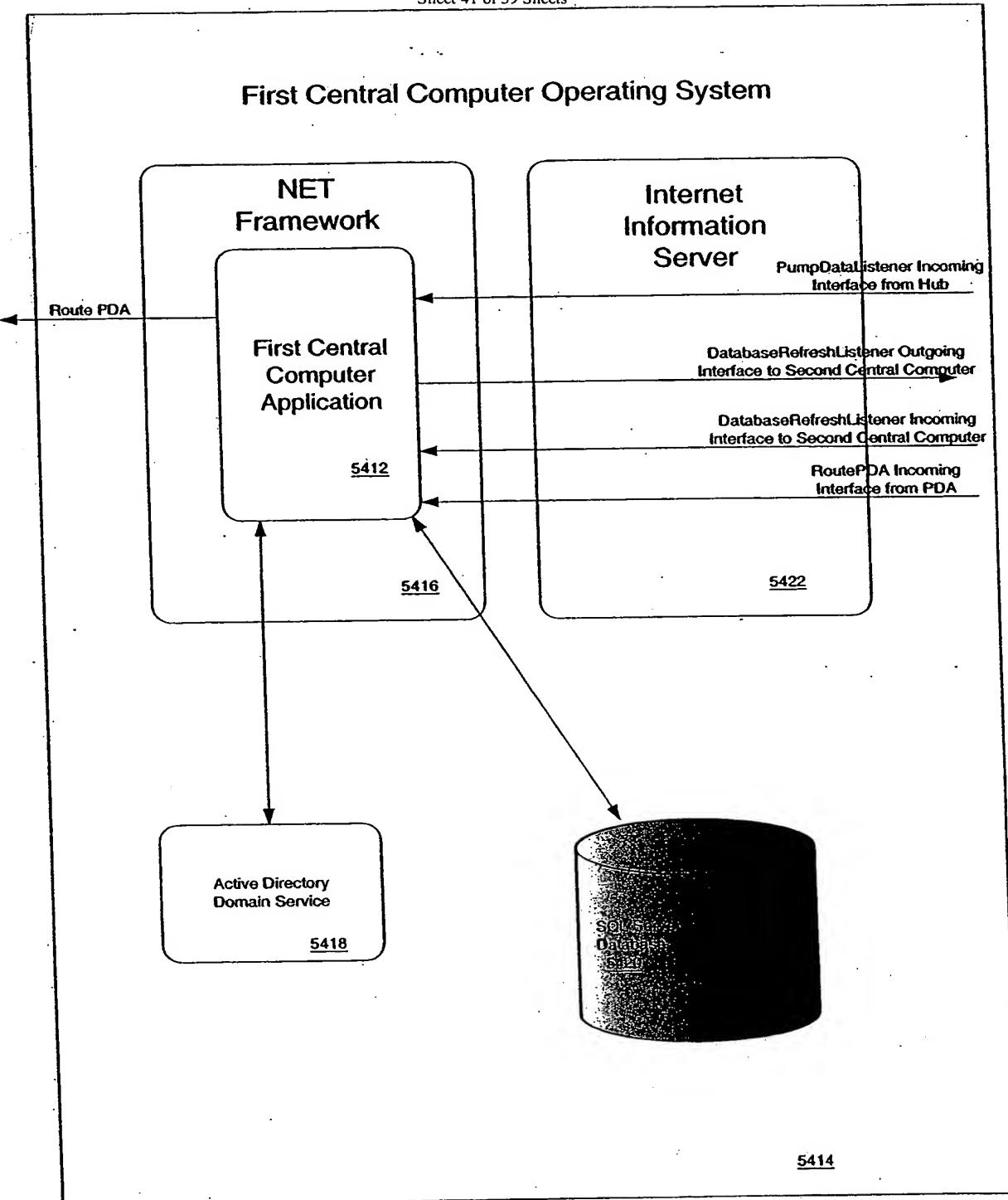


FIG. 54

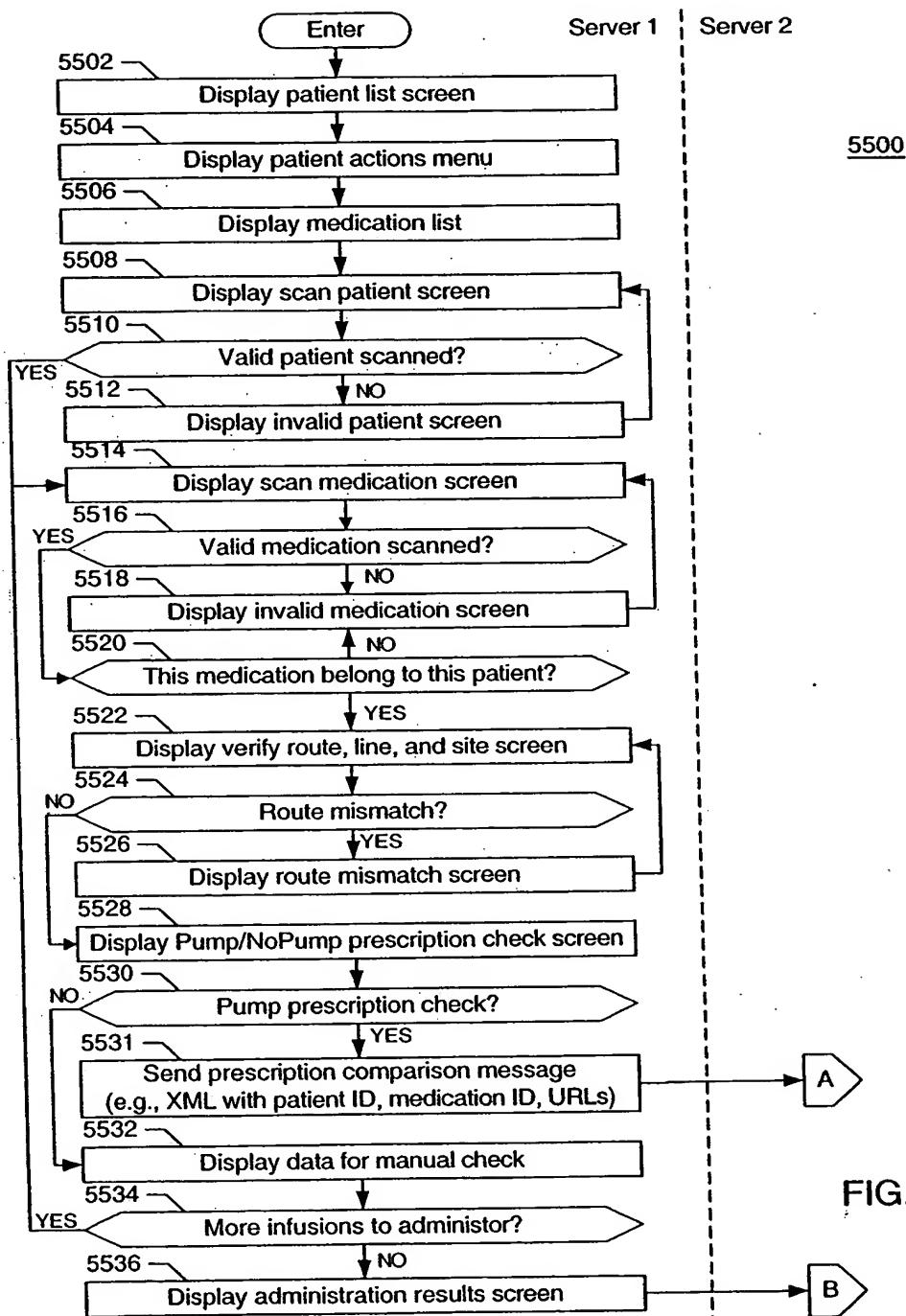


FIG. 55A

FIG. 55B

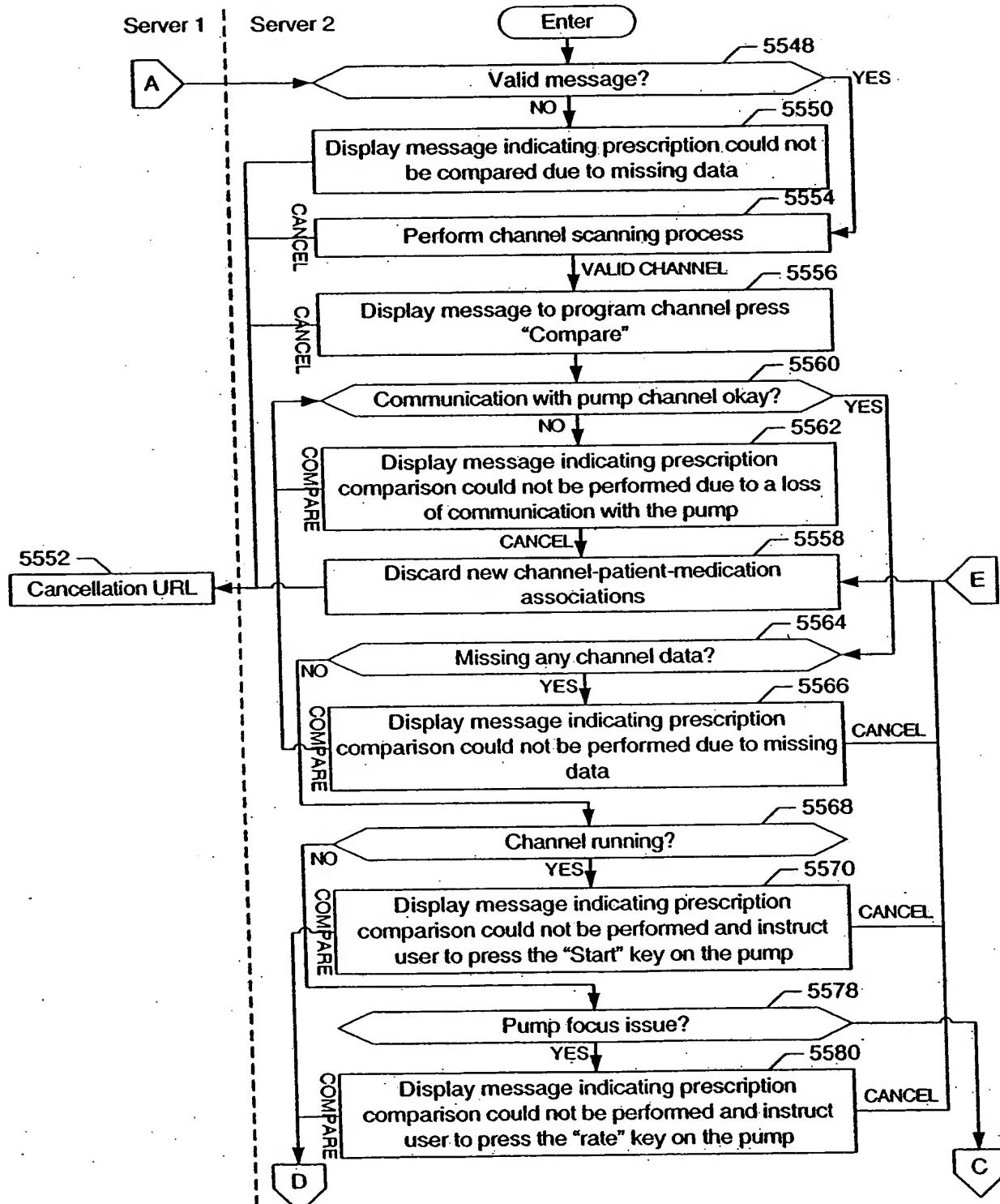
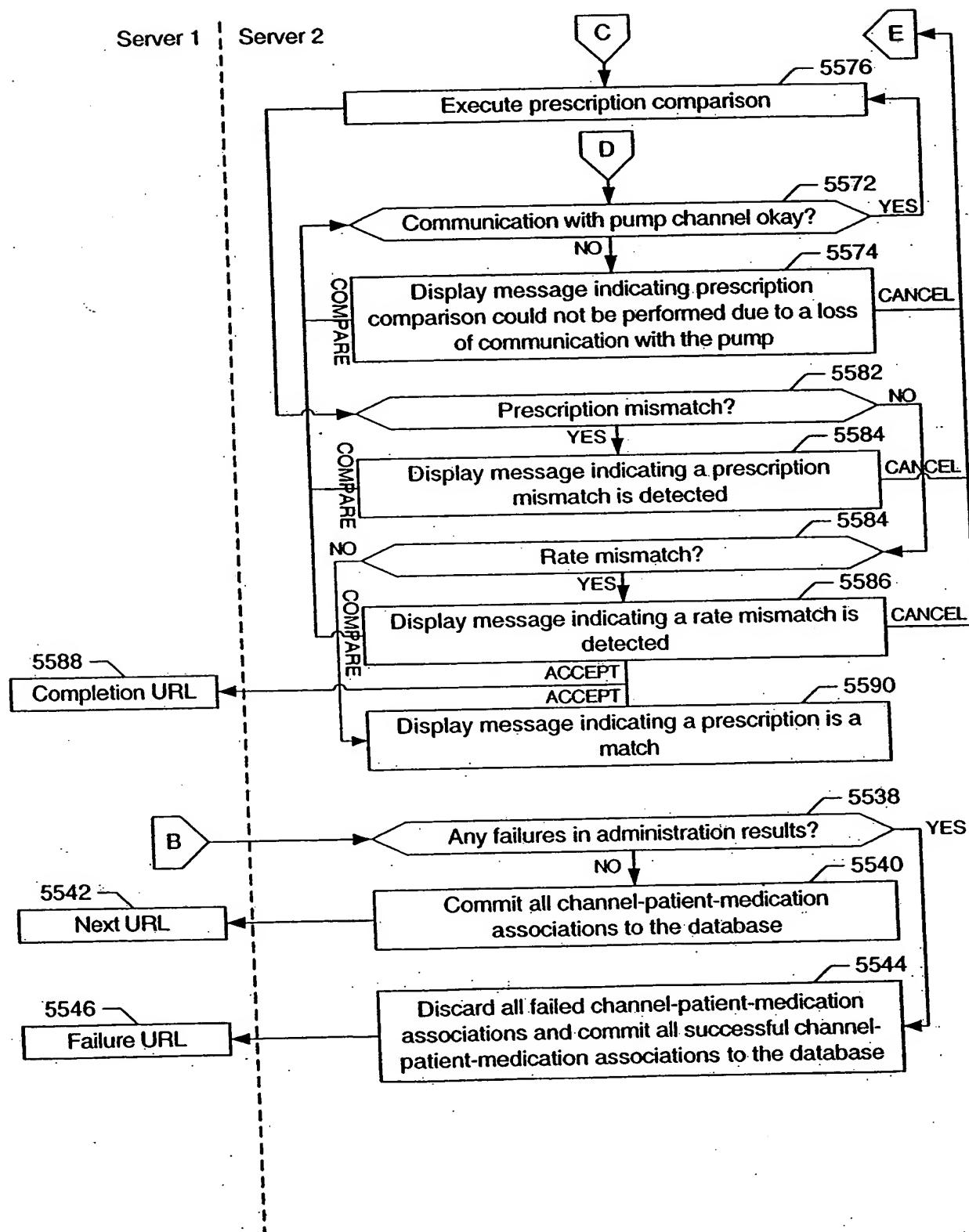


FIG. 55C



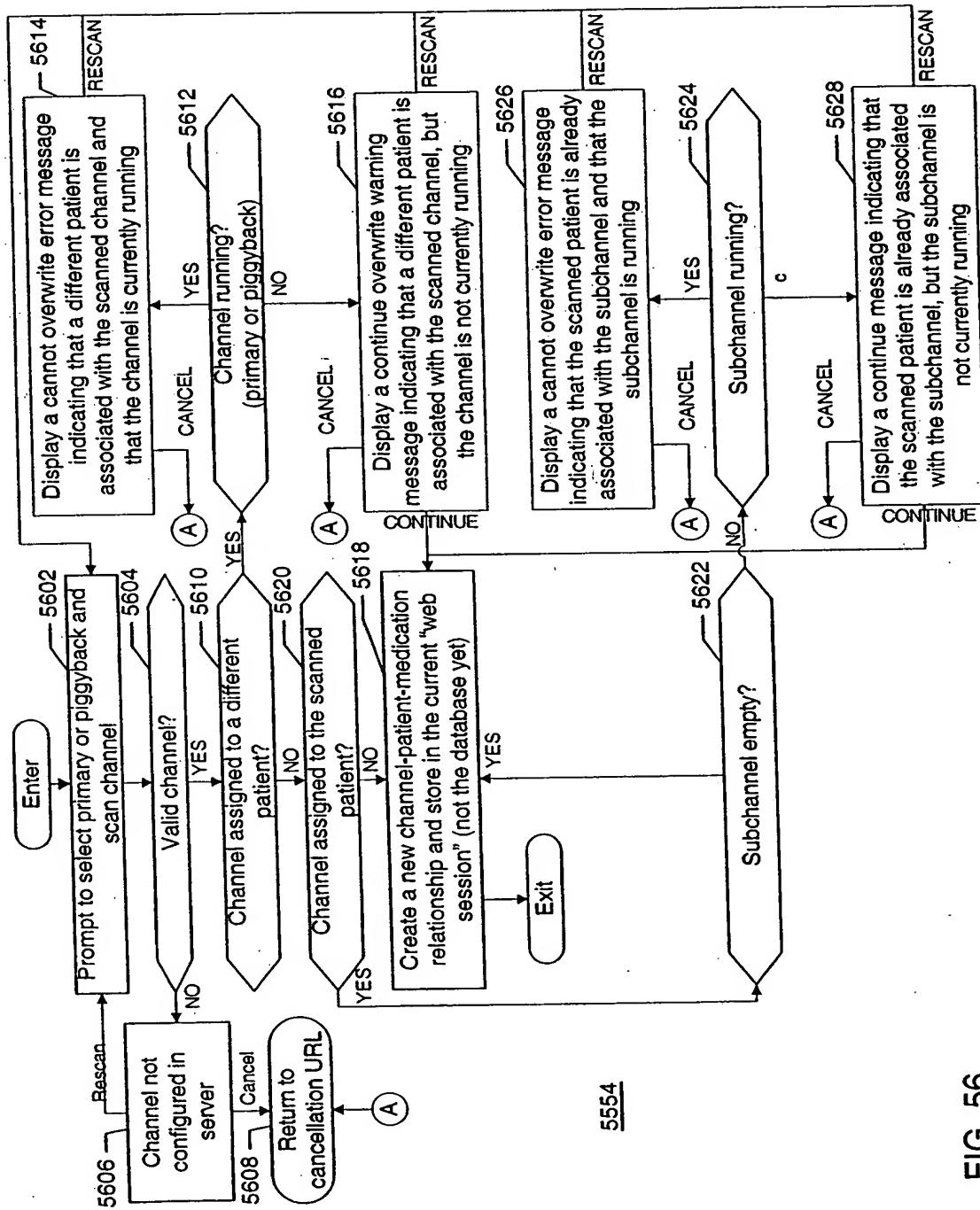


FIG. 56

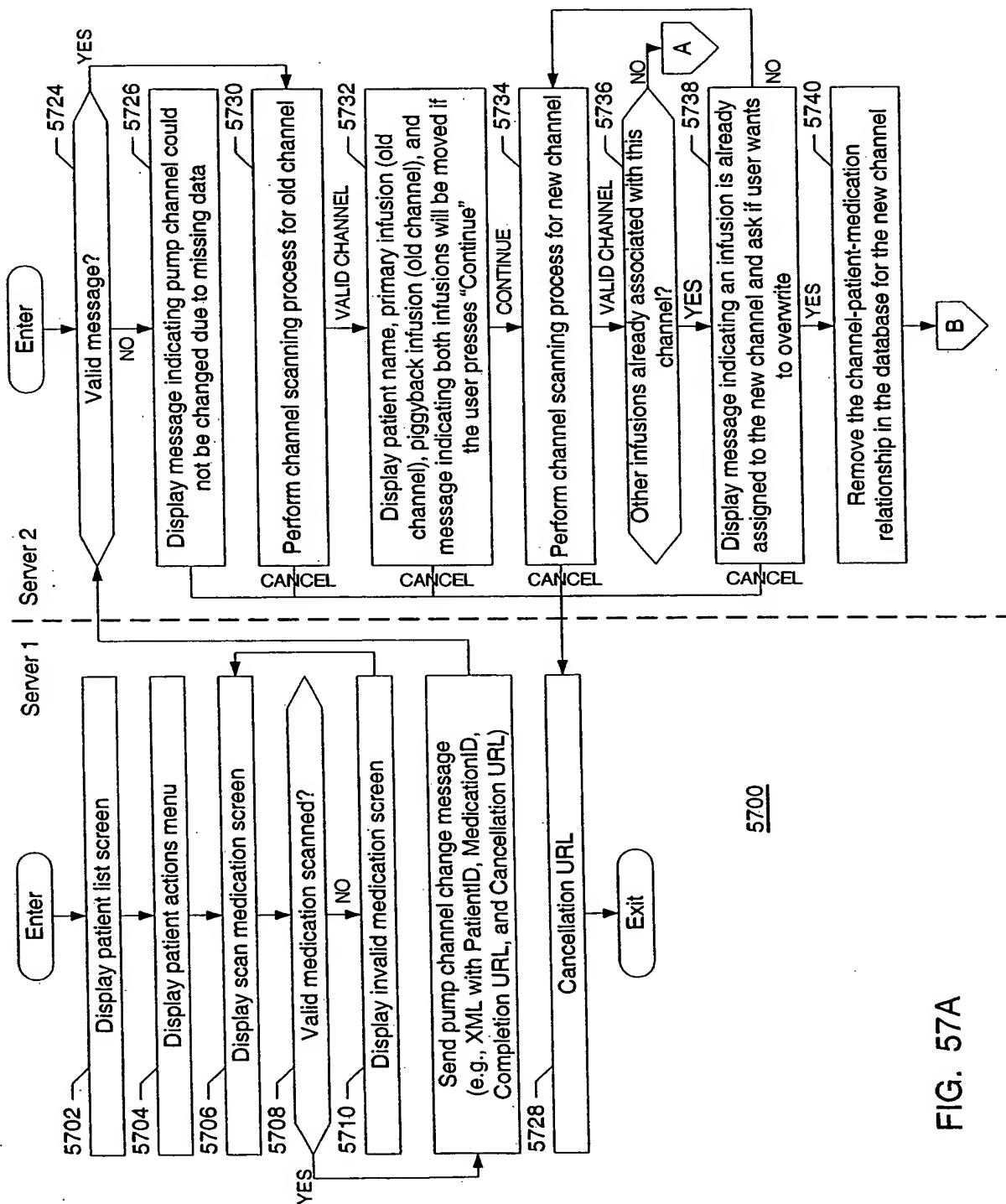


FIG. 57A

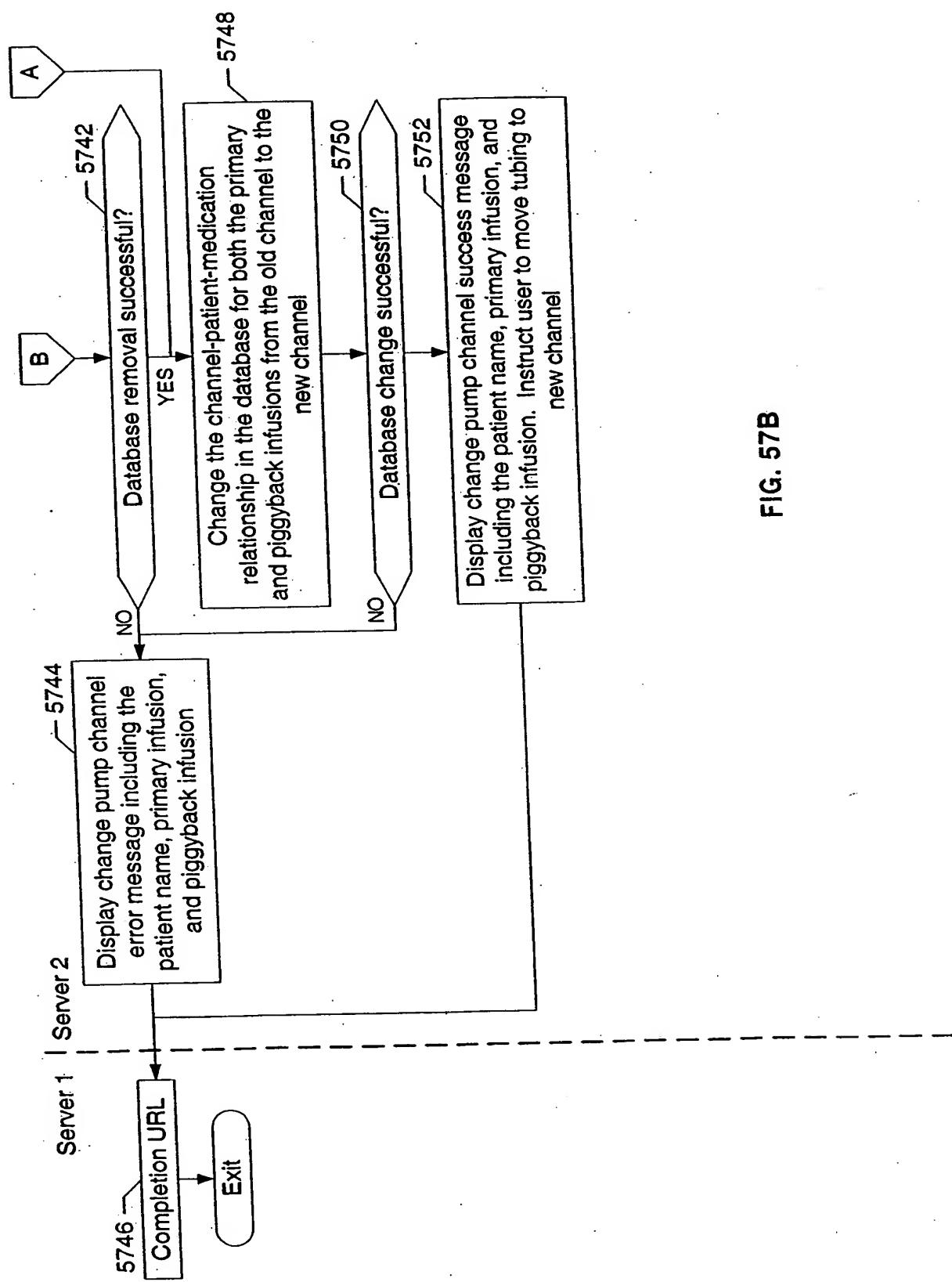


FIG. 57B

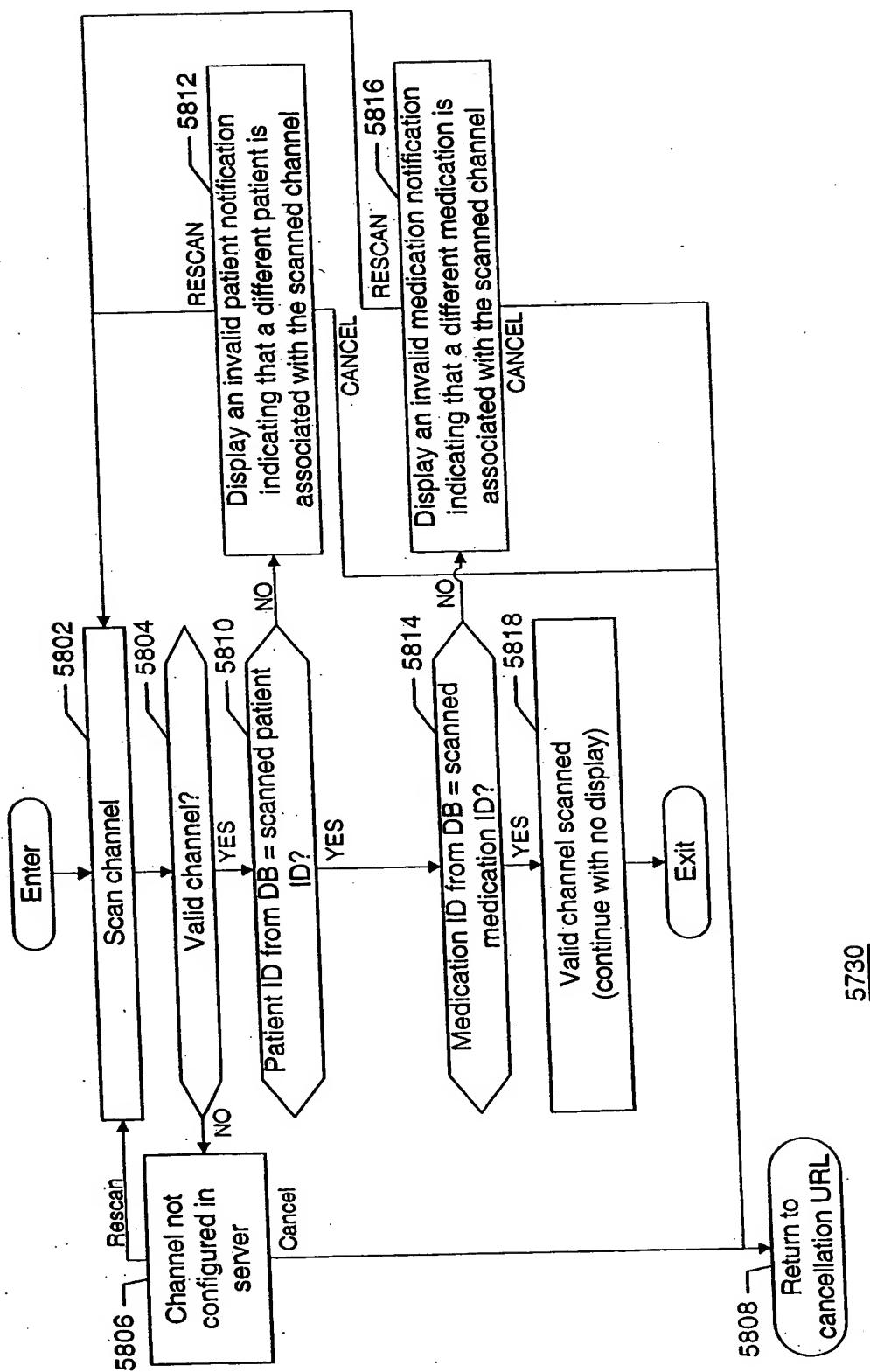


FIG. 58

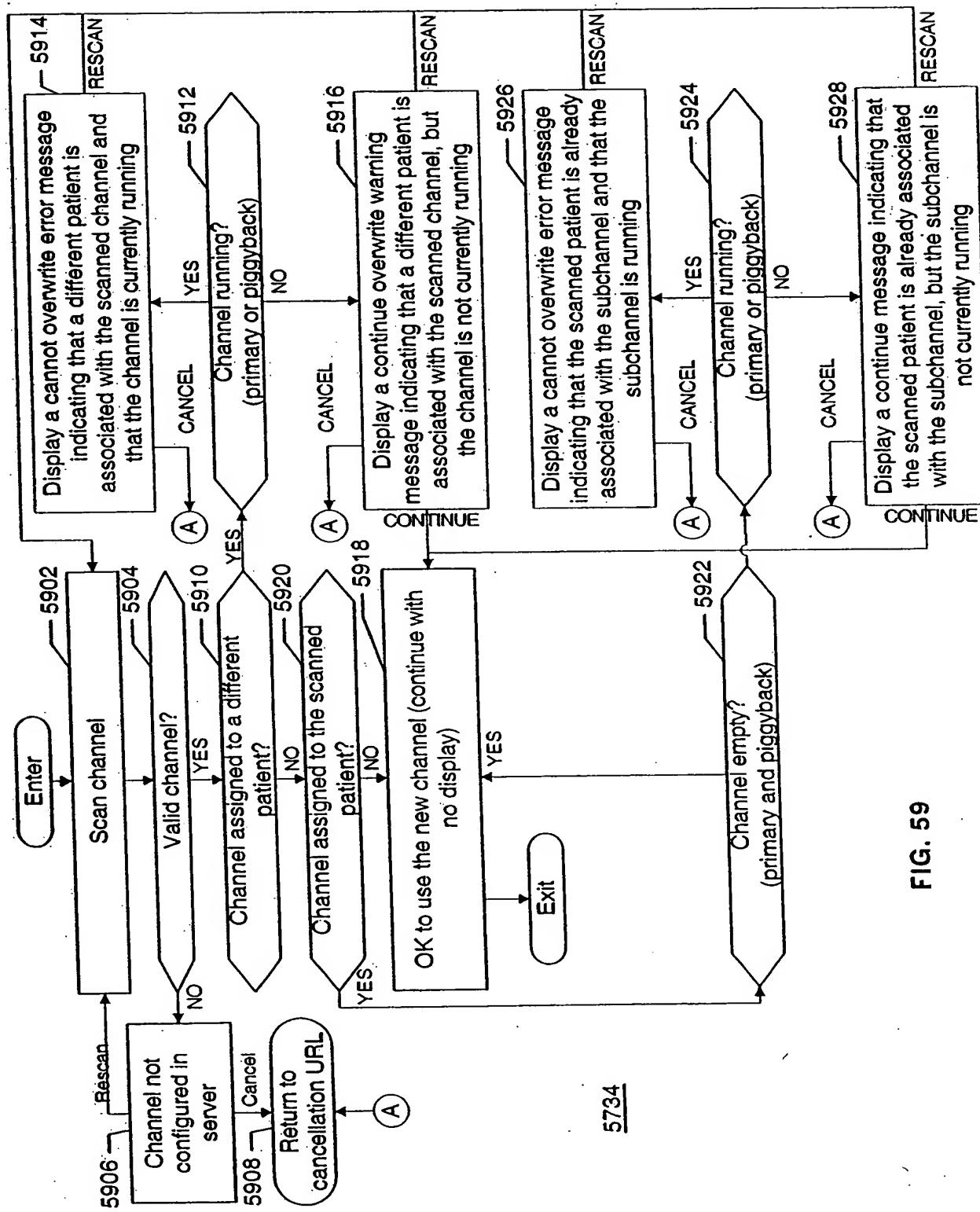


FIG. 59

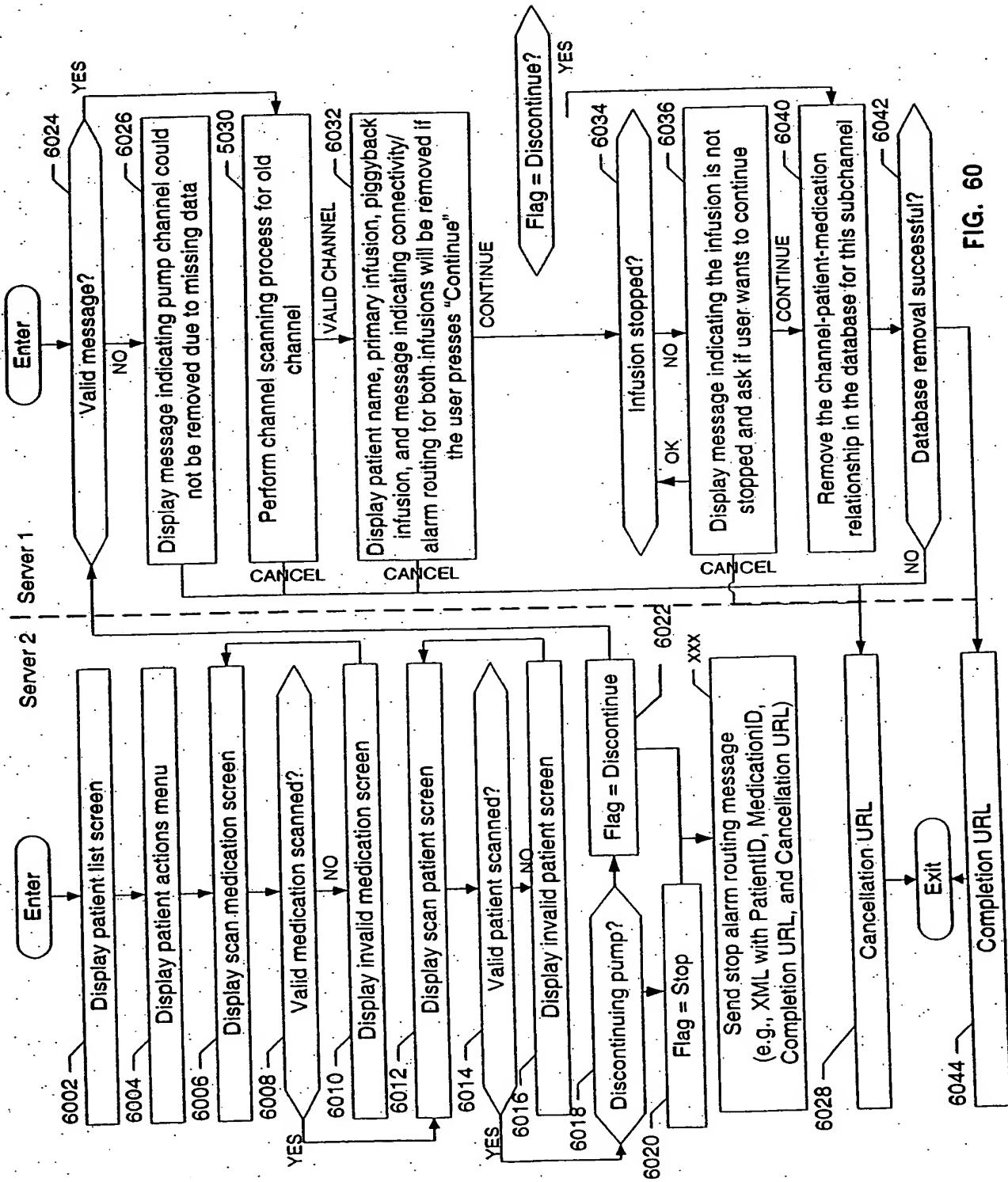


FIG. 60

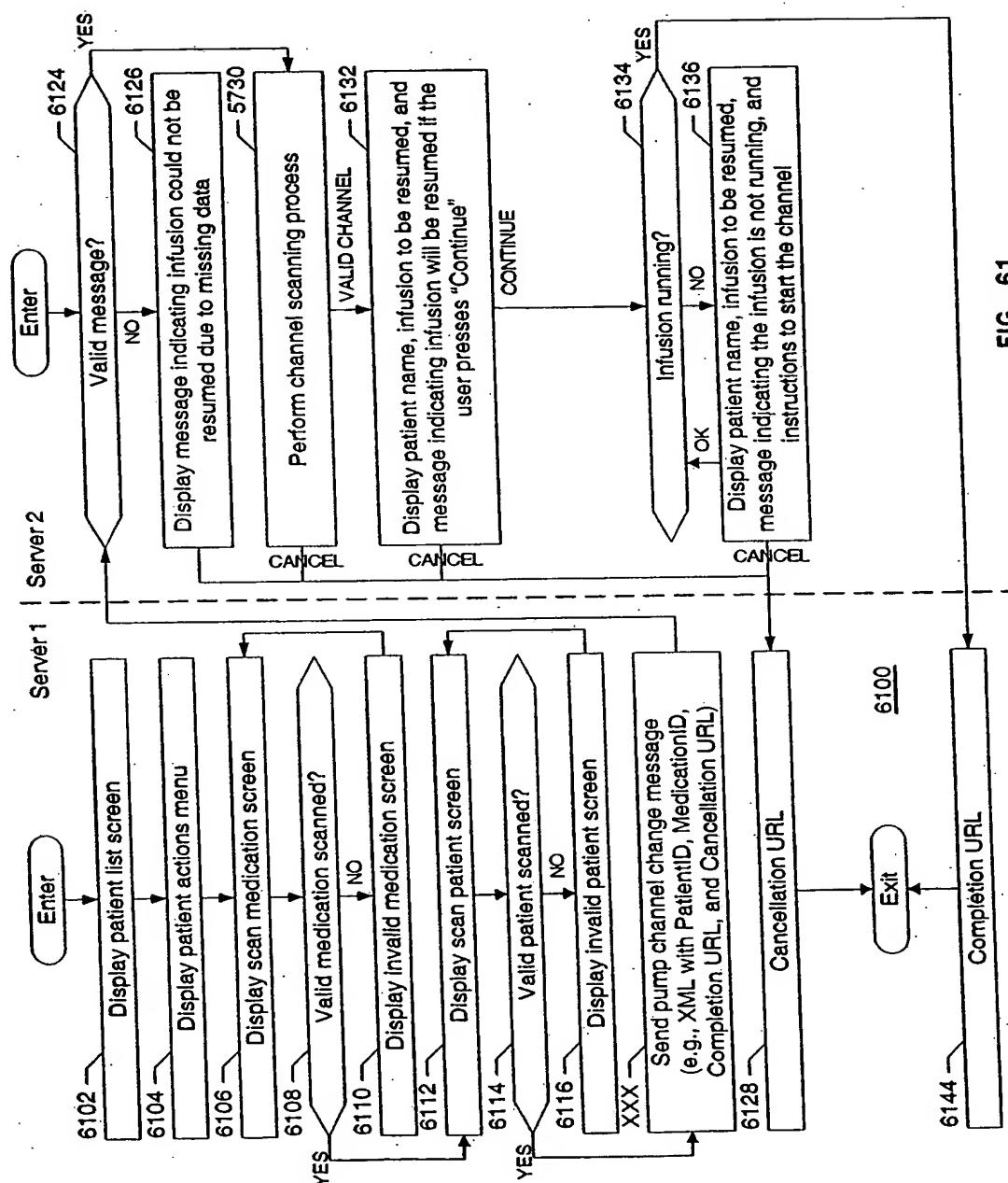


FIG. 61

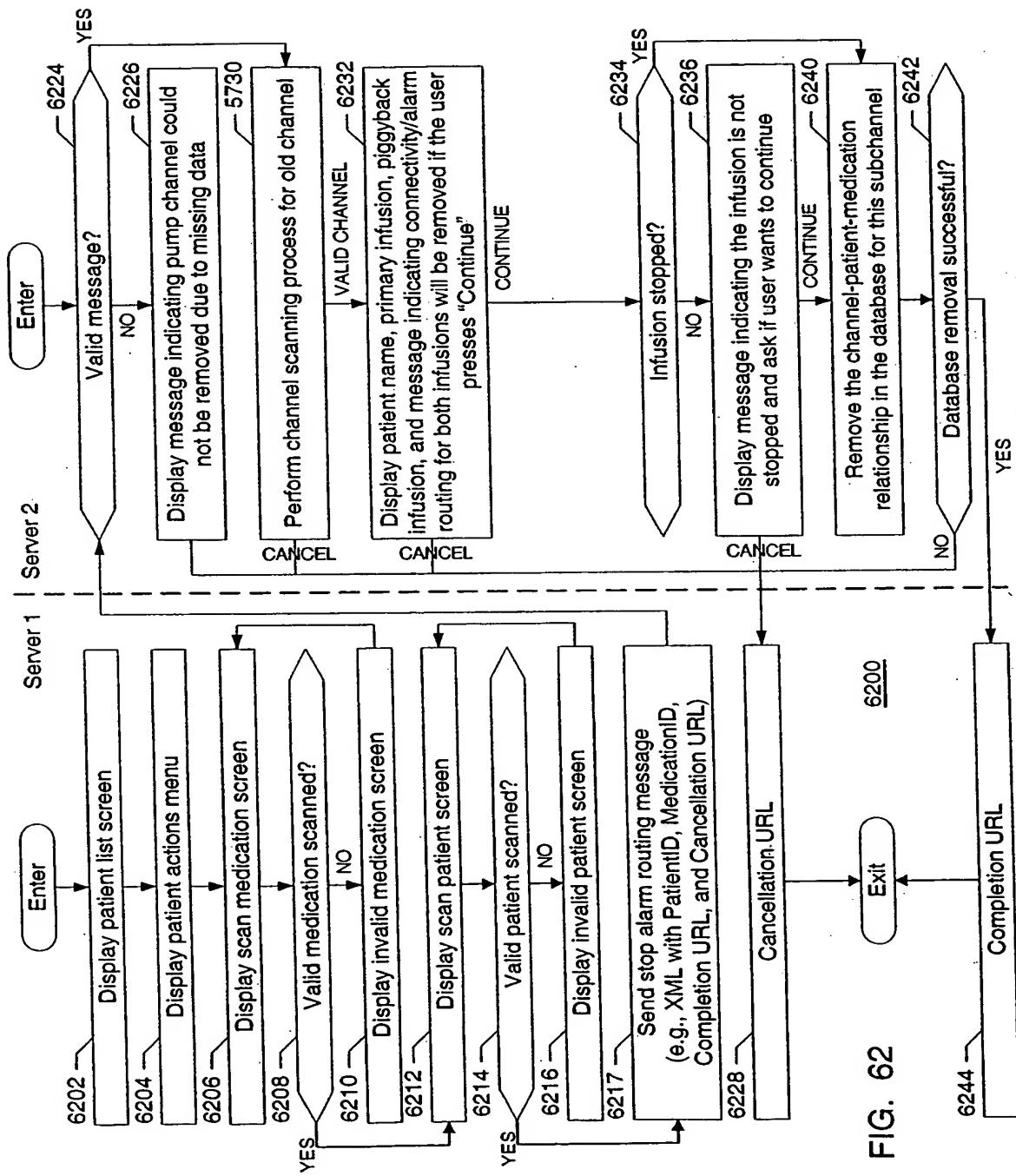


FIG. 62

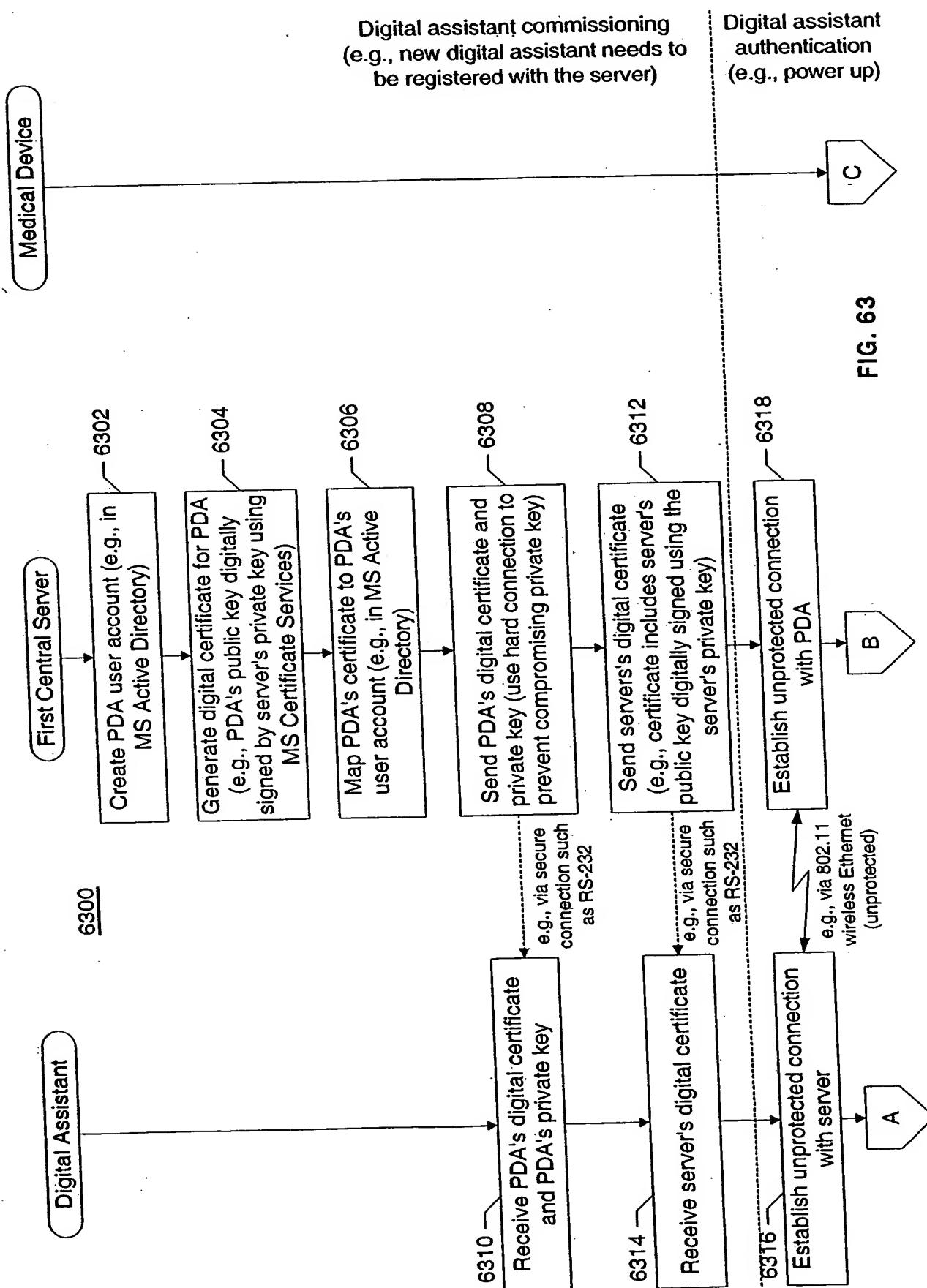


FIG. 63

Digital assistant authentication (e.g., power up)

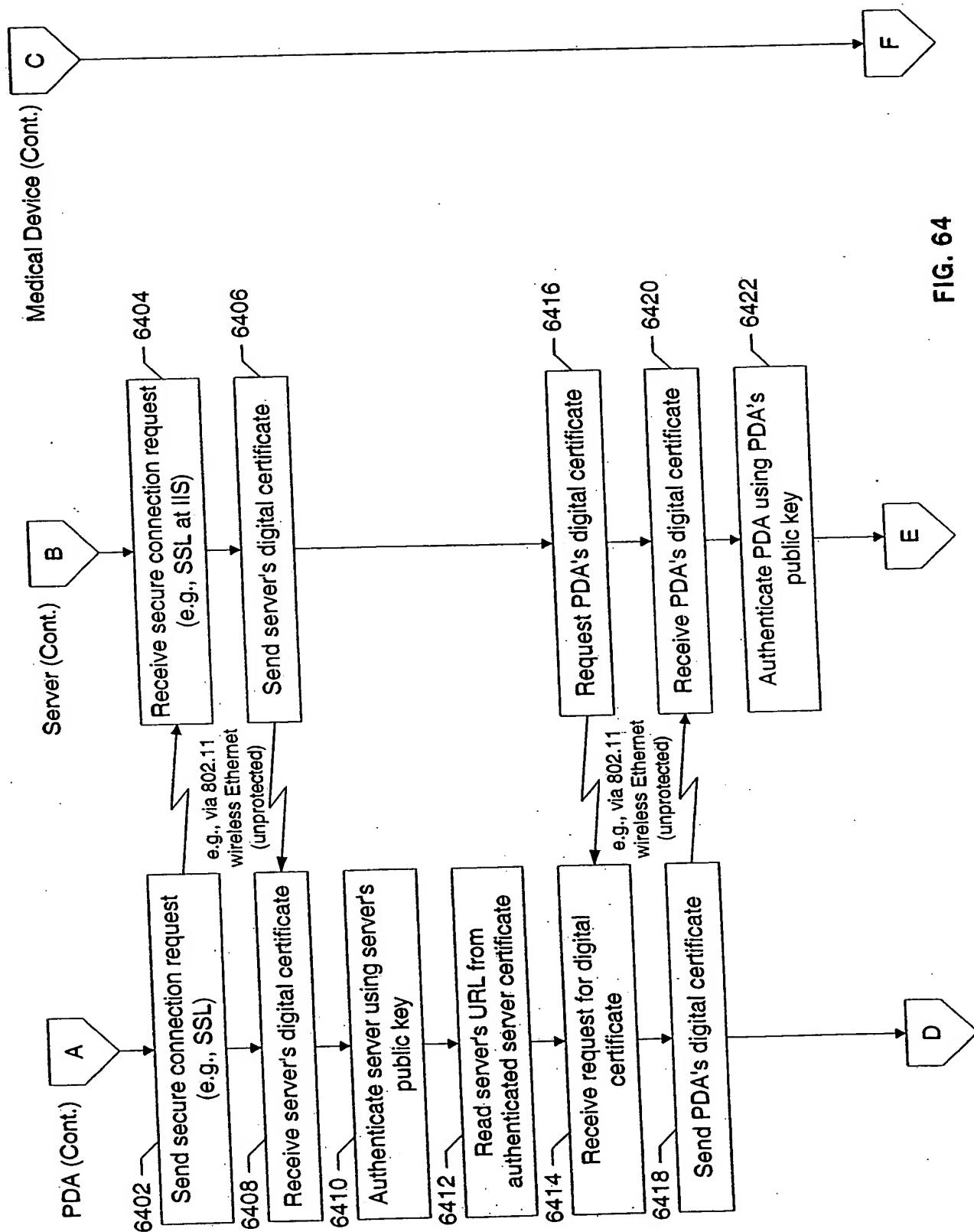
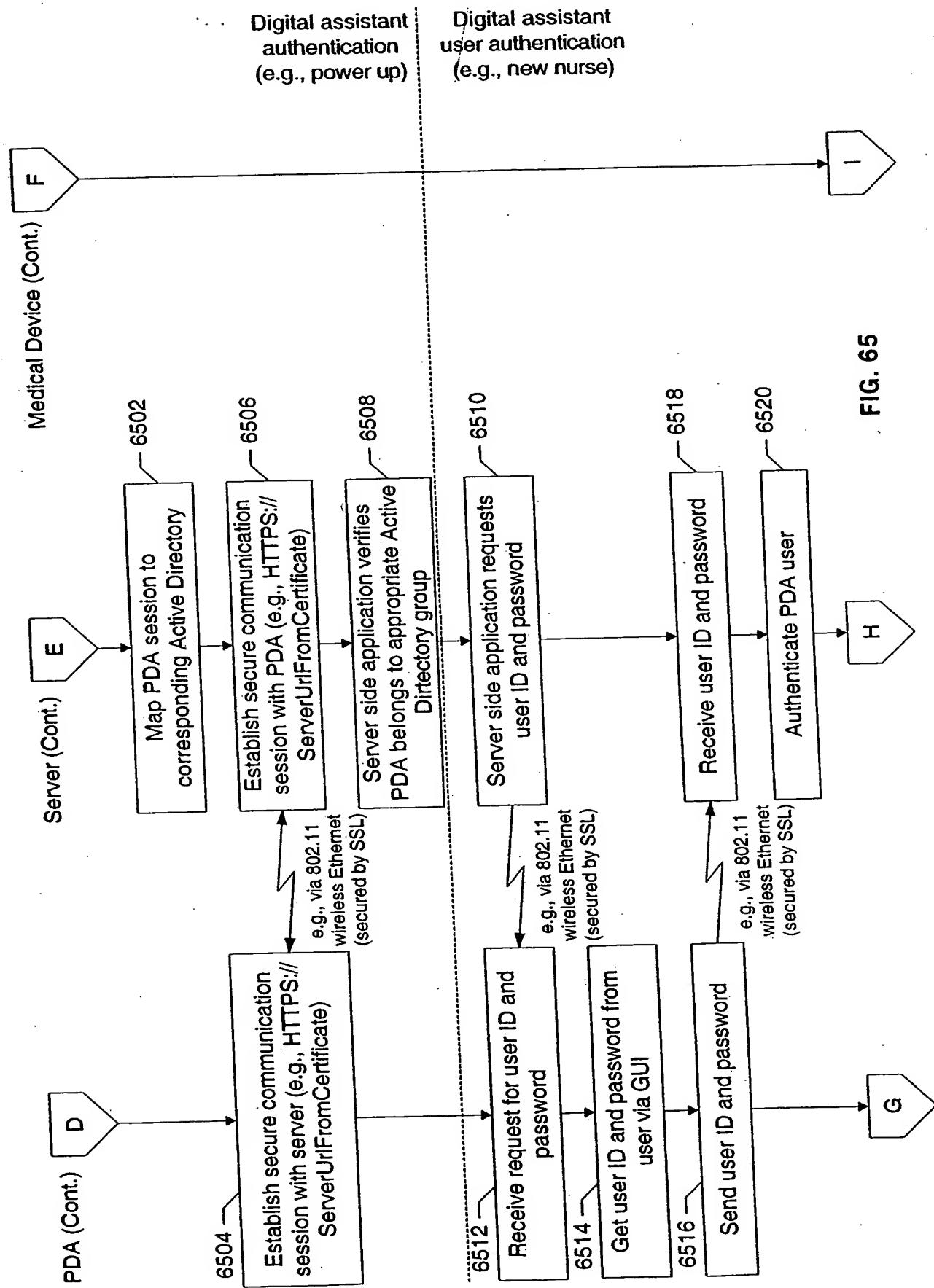
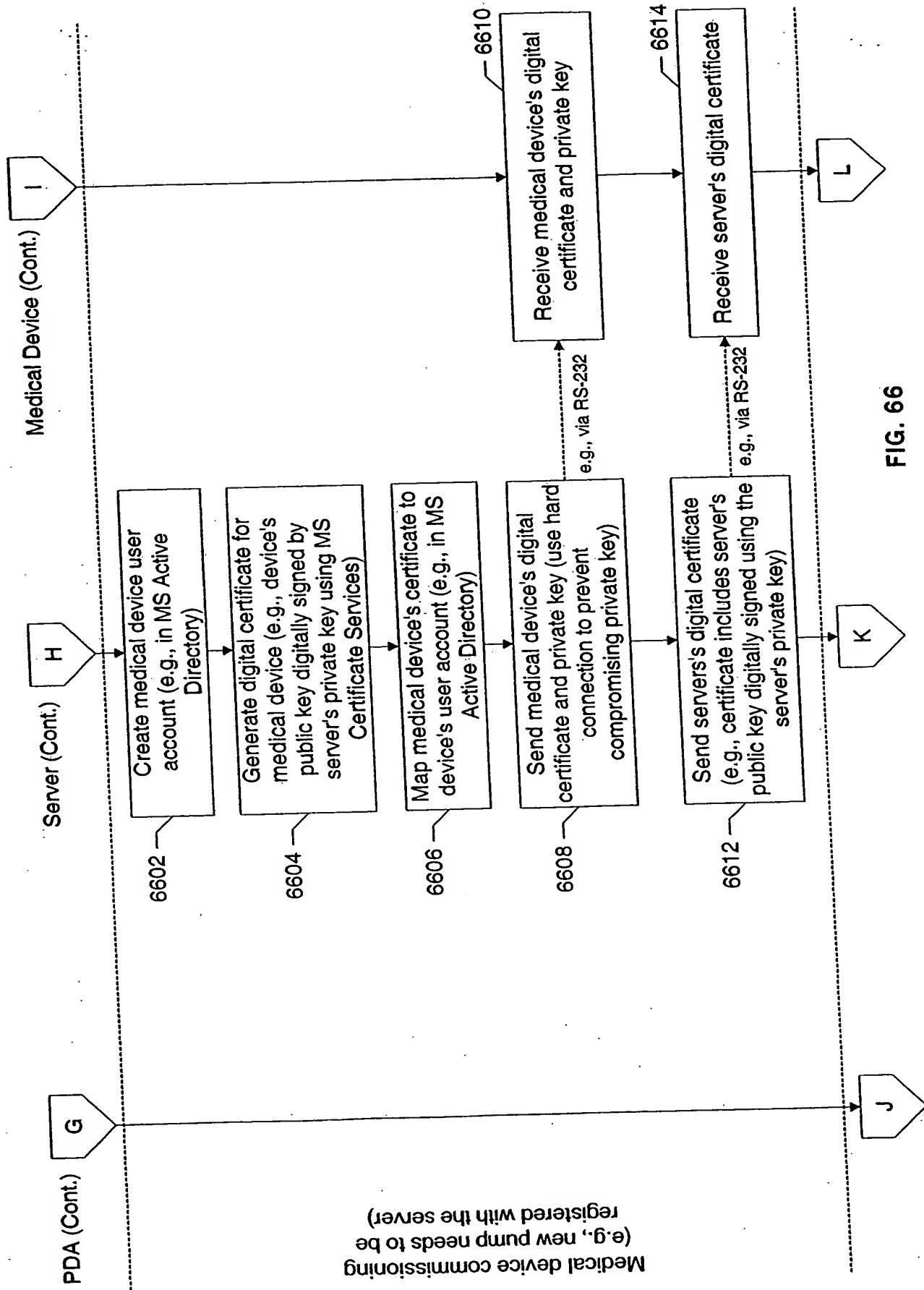


FIG. 64





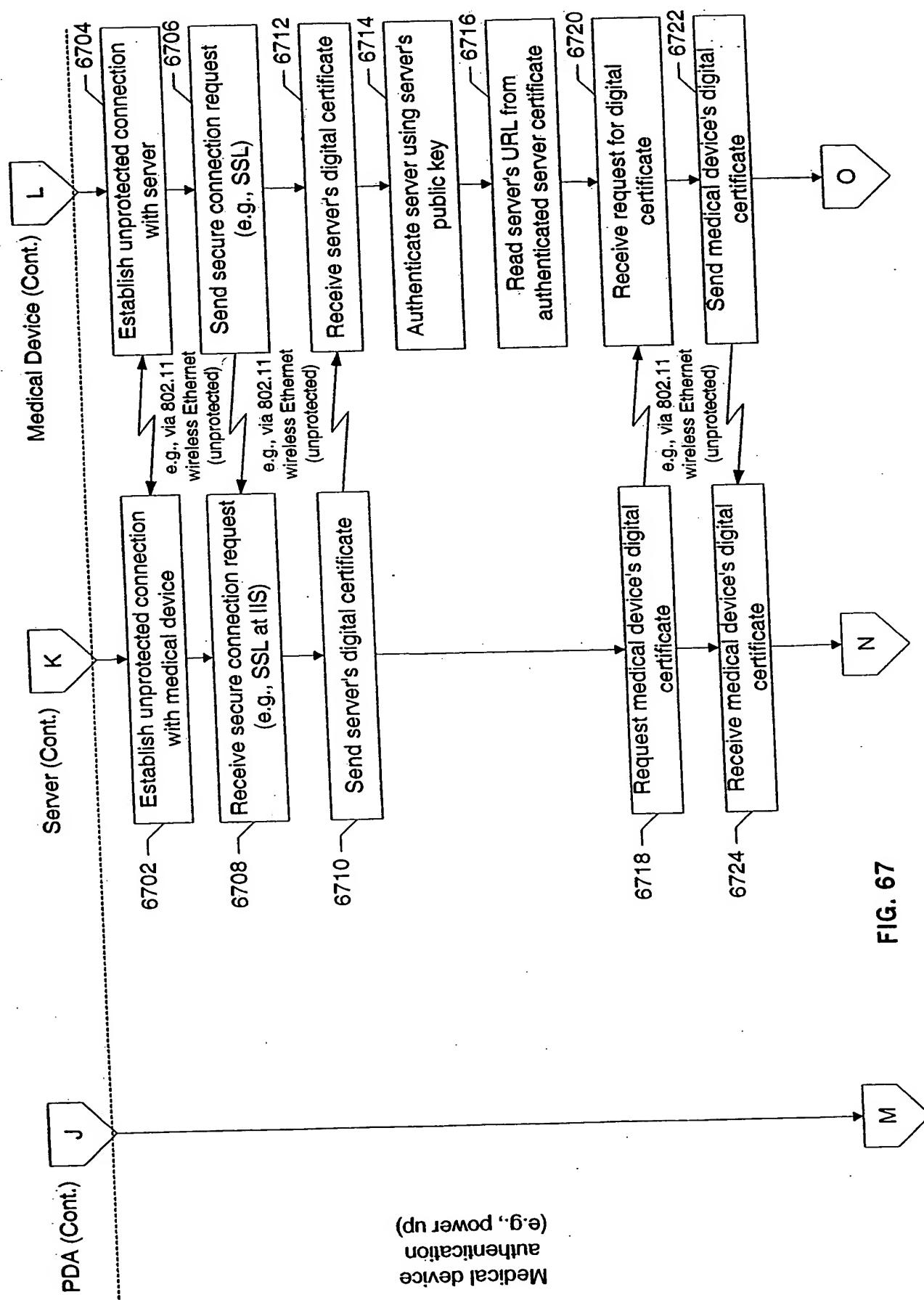
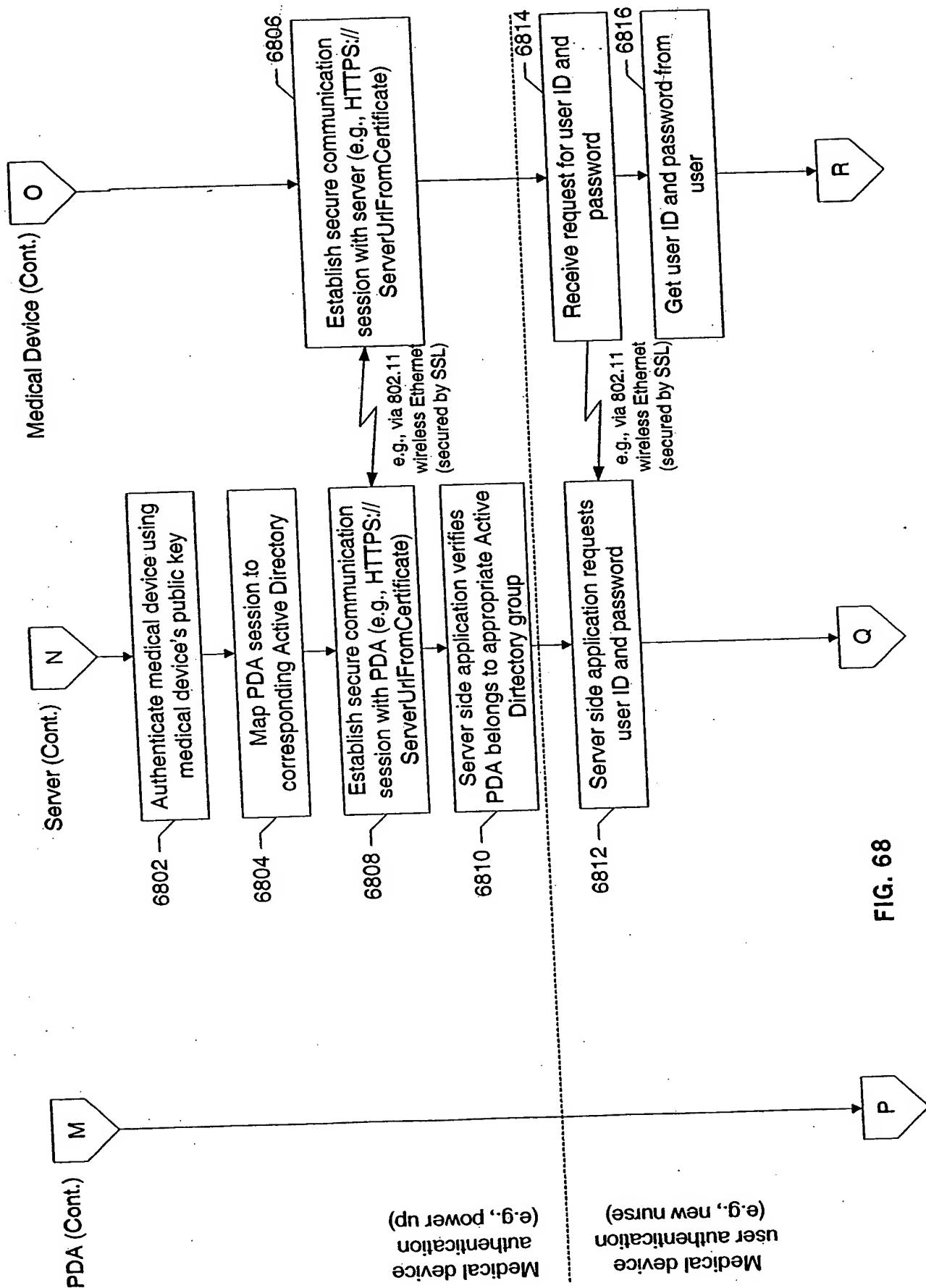
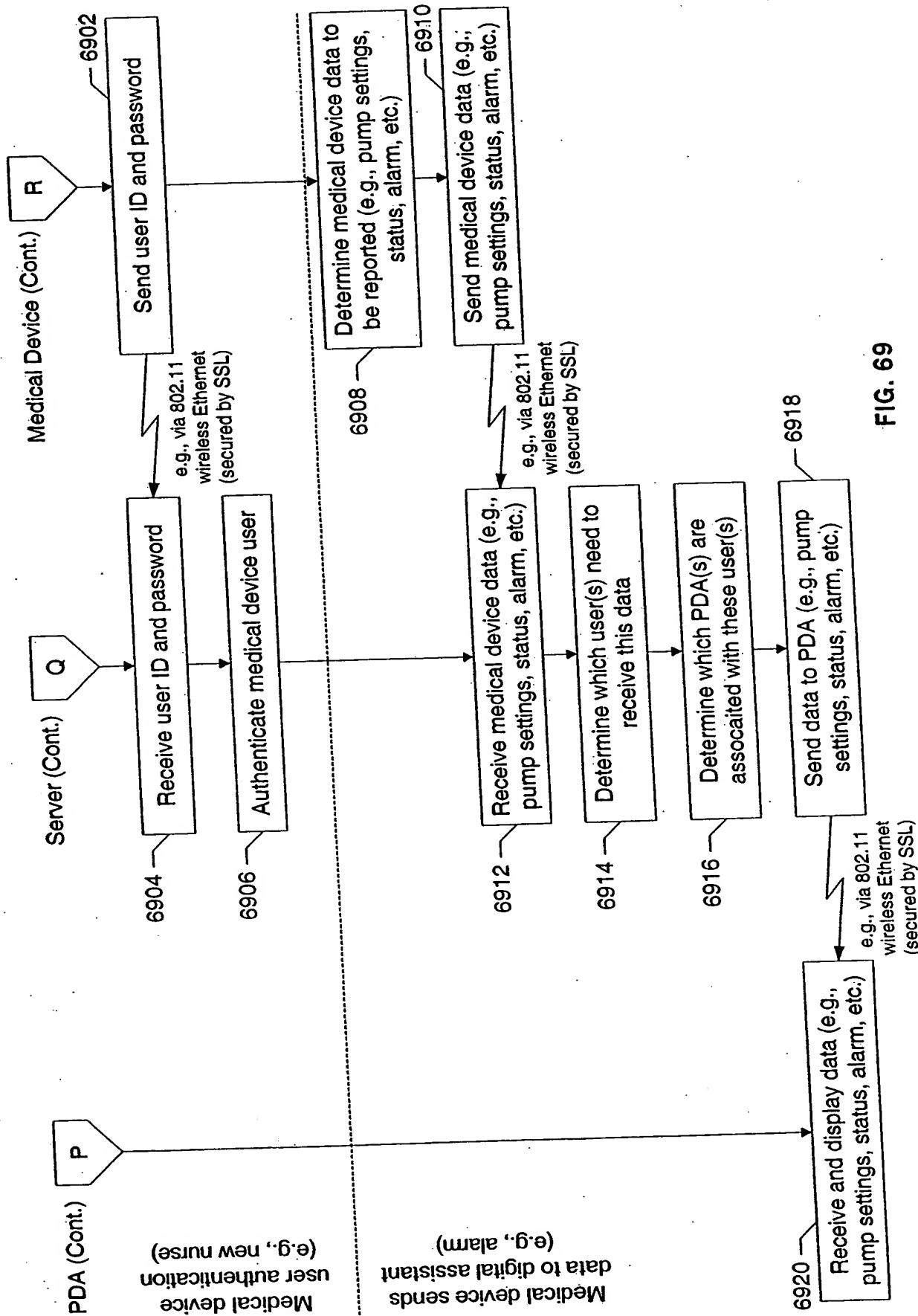


FIG. 67



**FIG. 69**